

An aerial photograph showing a cluster of houses with brown roofs nestled between dense green forests. The sun is low in the sky, casting long shadows and highlighting the textures of the trees and roofs.

THE FUTURE OF OREGON'S WORKING FORESTS

Choices,
Consequences
And What's
At Stake
For Oregon

A Special Report
of the Oregon
Forest Resources
Institute

Oregon is blessed with working forests that contribute to the state's environmental, social and economic well being. Working forests in Oregon and other regions not only provide most of the wood and paper we use every day, they also contribute to the quality of our air and water, draw carbon dioxide—a greenhouse gas—from the atmosphere, and provide wildlife habitat and recreational opportunities. In short, our working forests serve a diverse array of vital, public values.

Oregonians have done many things right to sustain our working forests. We created the nation's first sustainable forestry law, the Oregon Forest Practices Act, requiring replanting after harvest as well as the protection of wildlife, soils and water resources, and long ago adopted statewide land use planning to help keep forestland in forest use. These were pioneering measures of their time. Today, however, with global economic forces constantly shifting, Oregon's forests face challenges like never before.

The conversion of forests to non-forest uses worldwide (e.g., to agriculture or residential development) has been identified by the National Commission on Science for Sustainable Forestry as the number one threat to global biodiversity. According to the U.S. Forest Service and the Pacific Forest Trust, between 1 million and 1.5 million acres of private forestland in the U.S. are lost to development or other types of land conversion each year.

While Oregon is not immune to the pressures leading to the loss of forestland, the Oregon Department of Forestry (ODF) reports that at present Oregon retains 92 percent of the forest cover it had in 1850. This record can in part be attributed to decades of forward thinking. However, just as economic conditions and public demands are constantly changing, our thinking also must evolve with respect to our working forests. Oregon's working forests will face serious challenges and unprecedented opportunities in the future, and the stakes could hardly be greater.

HIGHLIGHTS

- Global competition and rising forest management costs are creating formidable challenges to the continued economic viability of Oregon's working forests.
- For large and small private forestland owners alike, the moment forestland becomes worth more for real estate development than for timber production, increased pressure to sell is an economic reality that cannot be ignored.
- Oregon's population may double in the next several decades, and new Oregonians will likely increase demand for developable land, raising real estate values and making forestland conversion more attractive.
- According to U.S. Forest Service research, 44.2 million acres of private forestland nationwide will likely see dramatic increases in housing development in the next 30 years.
- The consequences of forest conversion are varied and significant:
 - According to The Pacific Forest Trust, nearly 1.5 million acres of forestland in the U.S. is lost each year, releasing 275 million metric tons of carbon dioxide to the atmosphere that had been stored in trees.
 - Some 180 million Americans depend on forest watersheds for drinking water. Forest conversion will threaten that supply.
 - Habitat for diverse fish and wildlife species will decline.
 - Forest conversion to other land uses will adversely affect Oregon's 73,000 forest sector jobs as well as the sector's contribution to the state's economic output.
 - More wood will be imported into the U.S. from countries having lower environmental standards than Oregon.
- Solutions to these problems will include strategies to improve the competitiveness and economic vitality of working forests, as well as incentives and creative compensation to landowners in recognition of the many public values served by working forests.



THE FUTURE OF OREGON'S WORKING FORESTS

When it comes to forestland, Oregon is fortunate in many ways. The beauty, productivity and diversity of Oregon's forests are world renowned. Building upon this natural foundation, Oregon has been a pioneer in creative land use policy for decades, as well as a national leader in forest management, forest science and wood products manufacturing. As a result, while other regions have experienced extensive forestland loss, Oregon today retains about 92 percent of the forest cover present in 1850.

Nonetheless, pressures leading to forest fragmentation and land use conversion continue to grow. According to the latest National Woodland Owner Survey, there are over 150,000 private forest landowners in Oregon, with nearly 60 percent of these owners holding properties of less than 10 acres.

Already, a portion of Oregon's working forests has been converted to residential use. With Oregon's population expected to double over the next several

What is a "working forest?"



"A working forest is one being managed to sustain an array of resources that contribute to quality of life: wood and non-wood forest products, quality water, fish and wildlife habitats, outdoor recreation and ecological services such as carbon storage."

— HAL SALWASSER, DEAN, OSU COLLEGE OF FORESTRY

decades, demand for developable land will raise real estate values and make fragmentation or conversion of forestland even more financially attractive. As the current generation of landowners ages and gives way to younger generations who may not share the same ethic of forest stewardship, Oregon is expected to enter an era of forest ownership change unprecedented in state history.

At the same time, the economics underlying working forests have

shifted significantly throughout the nation. With global competition squeezing revenues and regulatory measures increasing the costs of practicing forestry, those owning working forests find it difficult to compete economically with low-cost plantations abroad and alternative land uses at home.

THE NATURE OF THE PROBLEM

As forestry increasingly becomes an international business, Oregon forest products must stay competitive with cheaper wood from other countries that may be harvested with lower cost labor and under less stringent environmental laws. One consequence of the globalization of forest product markets has been a sub-



Gail Kimbell
Chief, U.S. Forest Service
Washington, D.C.

**"Oregon is blessed with an amazing variety of forest ecosystems, some of which I got to know working in the Forest Service, the BLM and in my own exploration. For a for-
ester, Oregon is a special place. My career has given me a heightened sense of how remarkable our forests are, but also—with the real threat of forest loss from population increase and development—how precarious their future is unless we act, act decisively and act soon. Forests can play a key role in meeting the challenge of climate change, in providing renewable energy supplies and in sustaining abundant flows of fresh, clean water. We must be prepared—and we must prepare our children—to meet that challenge."**



Hal Salwasser
Dean, College of Forestry
Oregon State University
Corvallis

"What is at stake if no policy changes occur? Just following current trends, if we stay on the present path, we will lose massive areas of private forest to urban development; federal forests will become even bigger liabilities to taxpayers than they are now; the environmental values and communities closely related to federal forests will further suffer in the aftermath of large, uncharacteristic disturbances; forest ecosystem services will decline; we'll lose forest-related jobs and wealth, and we'll use more and more imported wood products. We need a national dialogue to create a twenty-first century, nationally integrated forest policy with incentives for sustaining American forests for all the values they deliver to our quality of life."

stantial increase in foreign solid wood imports to the U.S. Wood imports have more than doubled over the past four decades from around 15 percent to nearly 40 percent. As explained by Oregon State University College of Forestry Dean Hal Salwasser at a 2007 conference, these increased wood imports occurred during a period in which domestic consumption of solid wood products nearly doubled. Despite being a nation with abundant forest resources, and states such as Oregon with high environmental standards for forestry, Americans have looked elsewhere to meet rising demand for wood products. This not only diminishes the economic viability of Oregon's working forests, it also shifts environmental effects to regions which may not have comparable forest protection requirements.

Rising Regulatory Costs

Oregon's forest sector has been absorbing the costs of environmental regulation for decades longer than many of its international and domestic competitors. In 1941, the Oregon Forest Conservation Act was adopted to address reforestation needs and fire protection. When the U.S. enacted the Clean Air Act, the Clean Water Act and the Endangered Species Act in the early 1970s, Oregon already

What is "forest fragmentation" and what are its consequences?



Forest fragmentation is the breaking apart of forested areas into smaller, more geometrically simple pieces. The greatest consequence of this is the loss of habitat for fish and wildlife. Fragmenting forests and their habitat is considered to be one of the greatest threats to biodiversity worldwide.

For forests in the Pacific Northwest, fragmentation occurs when forested habitat is divided by agriculture, residential development or other permanent forms of conversion to non-forest uses. Harvest and regeneration activities appear not to create permanent fragmentation effects, as long as the land remains in forest use.

SOURCE: FOREST FRAGMENTATION, WILDLIFE AND MANAGEMENT IMPLICATIONS. BRILL, 1999

had three decades of experience with forest protection requirements. However, Oregon continued to look critically at its own forestry regulations in light of scientific research, and in 1971, the ongoing evaluation of the state's forestry policy resulted in the passage of the Oregon Forest Practices Act, the nation's first set of comprehensive laws governing the management of forestland. The Forest Practices Act was hailed as a landmark in regulatory reform, and Oregon is still one of only about a dozen

states to have any comprehensive forestry regulations.

Since then, growing public demand for protection of old-growth forests, threatened and endangered wildlife species such as the northern spotted owl, as well as concern about protecting water quality and native fish have added new regulatory constraints to forest management on both public and private lands. These constraints were instrumental in the significant reduction in Oregon's

federal timber harvest that occurred in the 1990s. During this period, several state stream protection initiatives also were enacted, adding to the regulatory demands placed on managers of forestland.

All of these changes had direct consequences on the economics of forestry in Oregon. Timber production was reduced or in some cases deferred indefinitely, reducing the commercial availability of timber to manufacturing facilities. Harvest methods were altered radically to protect streams and fish and wildlife habitat, resulting in management constraints and additional costs. Road standards were upgraded to protect soils and to reduce erosion, also adding costs.

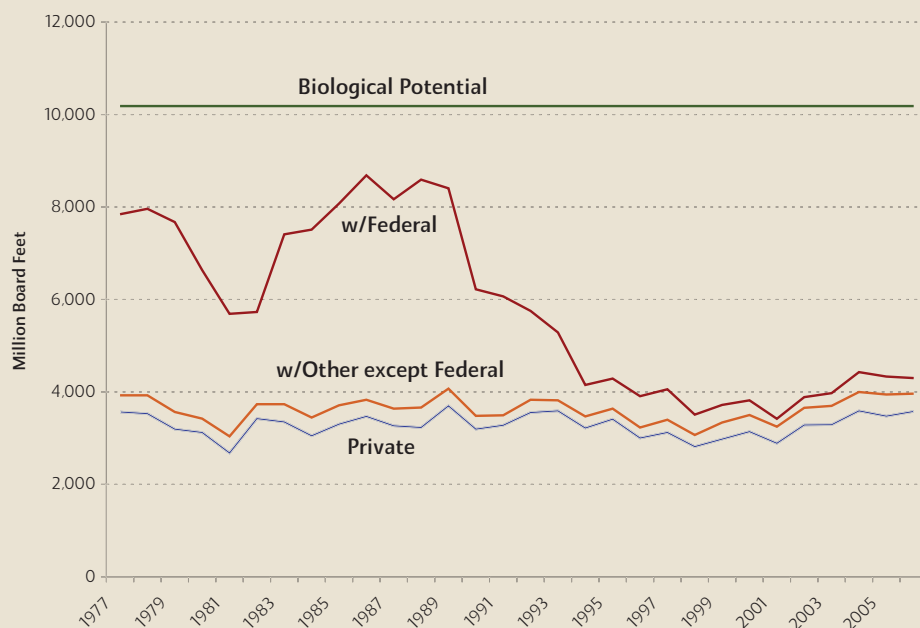
This growing body of forestry regulations was in response to changing social values and opinions as well as scientific research that advanced our understanding of forest ecosystems and their role in providing society with clean water, wildlife habitat and other public goods. However, the costs associated with protecting these non-timber values have been borne primarily by forest landowners, who generally do not receive any direct compensation for them, yet must still compete in a global marketplace where competitors often do not have to meet similar



John Gordon
Pinchot Professor Emeritus
Yale School of Forestry
Portland

"Oregon has a magnificent share of the world's forest wealth, but we are not realizing its potential. To do a better job, we need to take a more biological view of our forests. People and their values and social interactions do indeed determine to a large degree, any- more, what happens to forests. Even the wild- est places are subject to human influences in the form of air pol- lution and people- caused climate change. However, we cannot ignore the basic biolog- ical facts about forests for long if we are to manage them wisely."

Statewide Timber Harvest (1977-2006)



Statewide timber harvest has changed over time.

■ The green line represents the biological potential of about 10 billion board feet per year, which theoretically could be achieved if all forestlands (excluding areas such as wilderness areas and national parks) were managed for maximum sustainable timber outputs.

■ The blue line shows private timber harvest, which has been fairly constant over time.

■ The orange line shows private plus state, local and tribal harvest, which also has remained fairly stable.

■ The red line, which adds federal harvest, has dropped from well over 8 billion board feet in the late 1980s to about 4.3 billion board feet in 2006.

SOURCE: OFRI'S FOREST SECTOR CONTRIBUTIONS & POTENTIAL STUDY AND THE OREGON DEPARTMENT OF FORESTRY



Marvin Brown
Oregon State Forester
Oregon Department of
Forestry
Salem

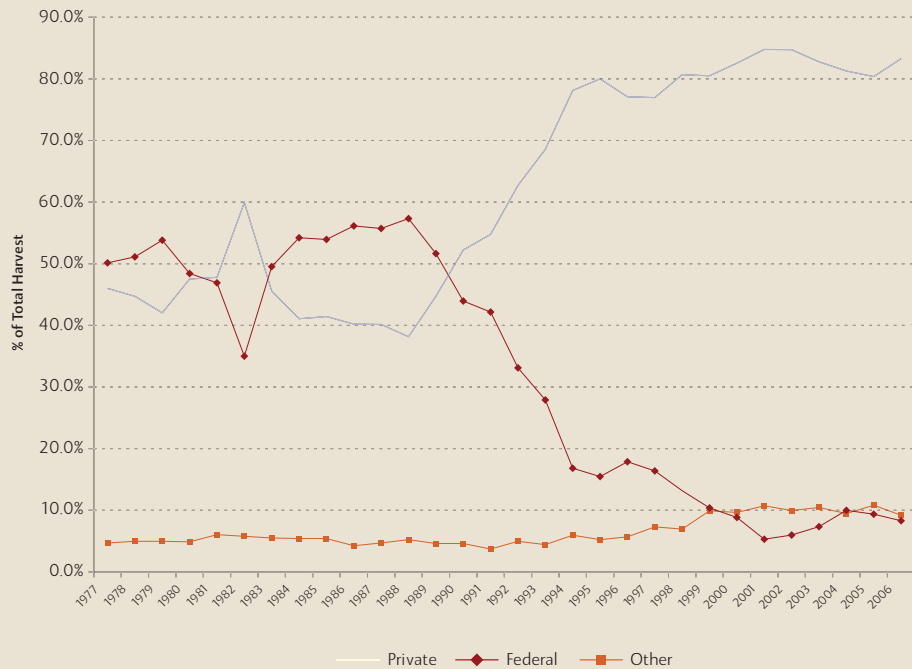
"What's important for us to examine is whether our current practices are going to achieve sustainability, and between lack of coordination among ownerships—federal, state, private and so on—and conflicting policies, I fear for our success. Oregon has been a leader in forest protection as well as tracking sustainability indicators and measuring them against international standards, but what we need is a new and critical look at the national scale, like the emerging policy proposals offered by the National Commission on Science for Sustainable Forestry, the Western Governor's Association and the National Association of State Foresters."

protection standards. This contributes to what some forest economists believe are among the highest wood costs in the world.

The sharp decline in federal harvests that followed the Northwest Forest Plan in 1994 and other federal forest management decisions in the early 1990s had a catastrophic effect on a significant number of companies and communities, but also substantially increased the demands placed on the state's private forestlands. According to the Oregon Department of Forestry, total annual wood harvest from both public and private forests in Oregon decreased from 8.6 billion board feet in 1988 to 4.3 billion in 2006. The proportion of this harvest sourced from private forestland (about 35 percent of the state's total forest area) jumped significantly, from 38 percent of the total in 1988 to 83 percent today.

While many private landowners have benefited from increased demand for their timber during strong markets with high timber prices, reduced federal timber harvest was a devastating blow in counties where federal lands were once the major source of timber supply. In those counties, mill closures have not only affected the forest products manufacturing sector, but also many private forest landowners and rural communities as well. Loss of these mills decreased the level

Changing Shares of Oregon Timber Harvest (1977-2006)



The proportion of Oregon's timber harvest has changed over time. Until 1990, federal timber harvest accounted for about 50 percent of total harvest and private timber harvest accounted for about 45 percent. With the decline in federal timber harvest, private harvest now accounts for over 80 percent, while federal harvest accounts for less than 10 percent.

SOURCE: OFRI'S FOREST SECTOR CONTRIBUTIONS & POTENTIAL STUDY AND THE OREGON DEPARTMENT OF FORESTRY.

of competition for sawlogs and increased the cost of hauling logs to distant mills, reducing the returns associated with growing timber. It also has reduced the number of family-wage jobs and exchanged a local source of wealth that historically paid for school libraries and other public services for a temporary annual subsidy from taxpayers across the nation. This subsidy is now in jeopardy. Finally, without these mills, residential development, agriculture and other non-forest uses may be the only economic option for private forest landowners.

Development Pressures

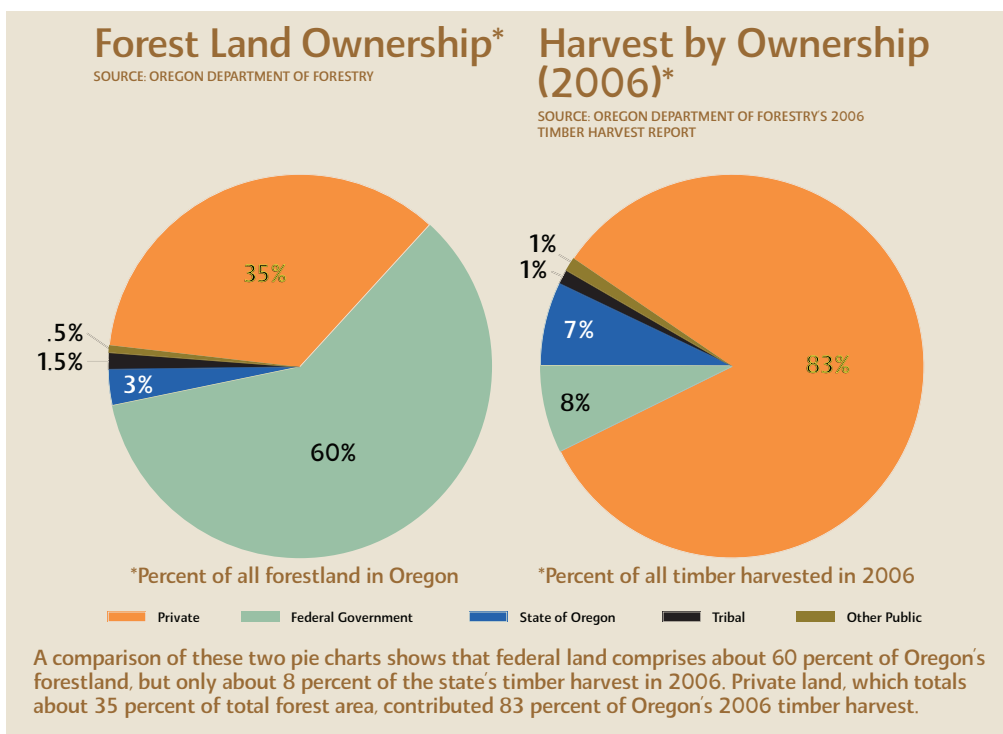
Perhaps the greatest challenge to the future of Oregon's forests is a matter of simple economics. Matthew Donegan, co-president of Forest Capital Partners, says the financial incentives to own and manage working forests often do not compare well against alternative land uses. Donegan moved to Oregon in 2005 when his company acquired the former Boise Cascade forestland in the state. In many ways, Donegan's company represents the new face of forestry. Forest Capital Partners is one of the country's largest investors in sustainably-managed, working forests. The company is now one of the largest private forest landowners in Oregon.

Donegan's work focuses on timberland ownership, and he sees forestry's current dilemma in these terms: "Forestry, much like agriculture, has to compete against alternative land uses. To sustain working forests over the long-term, the economic values of forestland use must equal, or preferably surpass, the economic values of non-forestland use. We are losing forestland to non-forest uses



David Morman
Director of Forest
Resources Planning
Oregon Department of
Forestry
Salem

"Oregon has been a pioneer in land use planning, beginning in 1973 with Senate Bill 100, which managed land use statewide. The program has certainly been effective, but in recent years other states have taken greater advantage of creative and innovative new incentive programs to help keep forestland from fragmentation and conversion. That has caused many to ask if we're doing all we can, and whether we need to take a fresh look at our land use policies and programs. In January 2006, an Oregon Task Force on Land Use Planning was established for this very purpose and will be reporting to the governor."





Matthew Donegan
Co-president, Forest
Capital Partners, LLC
Portland

"Just as the public benefits of working forests are economic, environmental and social in nature, so too the ownership objectives of most private landowners encompass these same elements of the 'triple bottom line.' Most forest landowners pride themselves as forest stewards challenged by the economic realities posed by a growing population, escalating real estate values, eroding commodity values and increasing regulatory costs. As we believe most forest landowners are predisposed toward preserving working forests, we must find incentives to offset the simple, economic pressure to sell, versus hold their land for long-term, sustainable timber production."

because it is in people's financial interest to sell. To change this, we need to make it in people's best interest to hold." In other words, if forestland is worth more for its real estate development potential than for its timber-growing value, it will only be a matter of time before the landowner has to ask, "Does selling make more economic sense than holding forestland for long-term, sustainable timber production?"

"The concept of sell-versus-hold is a meaningful tool for understanding landowner incentives driving sales and, ultimately, forest fragmentation," Donegan said. Simply stated, a sell-versus-hold ratio can be calculated by comparing the economic value of selling selected properties in the short term versus holding them for long-term, sustainable timber production. Ratios greater than 1.0 indicate that an incentive exists to sell, fragment and potentially convert forestlands to non-forest uses. The rule applies not just to large landowners like Forest Capital Partners, but to thousands of smaller, family forestland owners as well.

"We're not in this for the short term," said Donegan, who is a lifelong outdoor enthusiast and conservationist. "Our hope is to increase the long-term values from holding and managing forests, so as to decrease the motivation to sell."

Reaching the Tipping Point

Economists use a concept known as the "tipping point," which is a moment where a combination of factors and events reaches a condition where there is no returning to a prior state. An example of this is the plight of the forestry community in eastern Oregon. As timber harvest came to a virtual halt on federal lands, the impact was far greater on the east side of the state, where federal ownership is the lion's share of the land base. Mills began to close, and the economic equation began to change for private forest landowners. Without mills nearby, logs need to be hauled longer distances, taking extra time and significantly increasing transportation costs. Coincidentally, alternative land uses such as real estate development became economically attractive options.

The consequences of this change go far beyond forest economics. When forestland is sold for development or passes into other uses it can cause, among other things, loss of fish and wildlife habitat, reduced carbon storage potential, lower water quality and a reduction in cultural and recreational resources.

Many planners and policy makers fear that family forest landowners, not just on the east side, but all over the state, may be forced to confront other potentially more lucrative uses for their lands due to the widening gap between the returns on timber management and development options. In addition, the family forestland community is aging, and many heirs have migrated to urban areas and no longer want to continue forest management traditions. The rich

texture and diversity that this ownership class brings to the state's forested landscape is increasingly at risk.

WHAT IS AT STAKE?

Working forests are increasingly at risk. According to U.S. Forest Service research, nationwide, some 44.2 million acres of private forestland will likely see dramatic increases in housing development in the next 30 years. The Forest Service estimates that the U.S. is losing 1 million acres of private forestland each year, and estimates from The Pacific Forest Trust place the annual loss at 1.5 million acres.

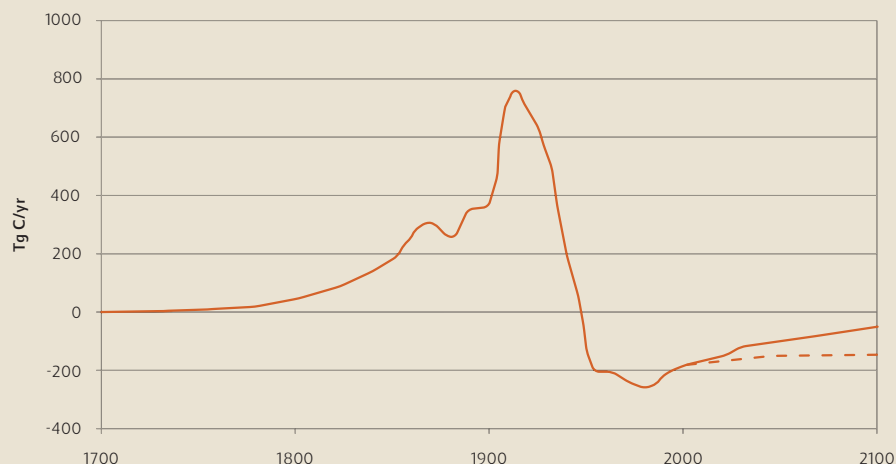
To the average person, statistics like these may appear to be the cost of progress, but to forest scientists, wildlife biologists, fire ecologists, hydrologists, climate scientists and water quality experts they are more alarming. The biologist sees it as the loss of fish and wildlife habitat and diminishing habitat connectivity as forests disappear or become fragmented through conversion. Climate scientists see tremendous losses in potential for storing carbon. According to the Pacific Forest Trust, the 1.5 million acres of forestland currently lost each year means that an extra 275 million metric tons of carbon dioxide are released annually into



Mike Barnes
Forestry Consultant and
President, Oregon Small
Woodlands Association
Newberg

"Small, family forestland owners are truly at a crossroads. We own more than two-thirds of America's forests, and because we're so different in what we do with our forestland, our land is all different as well. All that difference adds to the diversity of the forest ecosystem, which provides all sorts of public benefits, from wildlife habitat to clean drinking water, but forest policies need to provide opportunity as well as regulation. We all love our land and fully support forest protection regulation, but there should be some financial recognition of all the social values we're being asked to provide at our own expense."

Net U.S. Forest Carbon Emissions



GRAPHICS FROM: THE PACIFIC FOREST TRUST, *FOREST CARBON MANAGEMENT IN THE UNITED STATES: 1600-2100*, JOURNAL OF ENVIRONMENTAL QUALITY, 2006

U.S. forests both emit and store carbon. This graph plots carbon emissions from U.S. forests using a baseline established at the beginning of the 18th century, before large-scale human settlement and conversion of forests to agriculture began here. The 18th century saw little conversion of forestlands, but during the 19th and early 20th centuries, large swaths of forest, especially in the East, were converted to agriculture, drastically increasing the transfer of carbon from forests to the atmosphere compared with 1700. With human migration away from the East and economic depression, many formerly converted lands reverted to forestland, and by midway through the 20th century, U.S. forests stored carbon at a greater rate than in 1700. However, beginning about 1990 we see an increase in net emissions as large areas of forest are again lost to land use conversion, this time to permanent conversion for housing and other non-forestry purposes. The solid line shown after 2000 indicates projections through 2100 with forestland conversion continuing at current rates. The dashed line shows how carbon storage could remain relatively stable by using activities such as replanting, active forest management, biomass energy, forest conservation and use of wood products



Steve Hobbs
Executive Associate Dean,
College of Forestry,
Oregon State University
Former Chair, Oregon
Board of Forestry
Corvallis

"States like Oregon, with a high percentage of federal forestland, need to have a greater say in how those lands are managed. The current set of rules federal forest managers are required to operate under are complex, sometimes contradictory and certainly do not always meet the state's needs. The question we have to ask is whether we are doing harm by our hands-off policy for federal forests. It's clear that fuel reduction and thinning to reduce fire risk need to occur. A major way to fund much of the necessary work is to generate revenue from timber sales. And we don't have to do this work at the expense of the environment. We can do both, but federal policy needs to allow it."



Many people do not realize that most of the drinking water for Oregon's major cities originates in forested watersheds. As a result, our water typically requires much less aggressive filtration and chlorination than in other parts of the country. However, development and other related human-caused factors can adversely affect forested watersheds. Keeping the state's forests as forestland can help keep streams clean, forest processes working efficiently and water quality high.

the atmosphere—the same as the emissions released by 53 million automobiles.

Loss of forestland also threatens municipal drinking water. Some 180 million Americans depend on forests for their drinking water, according to the U.S. Forest Service. Forests cover about one-third of the nation's land base and supply more than half of the freshwater supply in the 48 contiguous states. Most people do not realize that forests act as an effective, natural treatment plant for our drinking water. They protect water quality by slowing surface runoff, stabilizing soils, preventing erosion and filtering pollutants. Most of the drinking water supplied to Oregon's largest cities, for example, originates in forested watersheds, and its quality is so high that it requires much less treatment than that for other American cities. A healthy forest ecosystem, more than any other land use, helps maintain water quality, and many municipal watersheds are working forests.

Beyond the loss of these significant environmental benefits from working forests, depressed timber production has adverse effects on many local communities. A study completed for OFRI in 2004, *Oregon Forest Sector Contributions and Potential*, indicates that the sector provides 85,000 direct jobs (73,000 as of 2007) paying above average wages, and contributes about \$22.4 billion, or about 11 percent, to the state's economic output. This means the difference between poverty and prosperity for many Oregon families, especially in rural communities where more than 50 percent of traded-sector jobs may be in the forest sector. The study further demonstrates the potential to sustainably increase timber harvest by a billion board feet per year, adding over 20,000 direct jobs and an additional \$5.4 billion to the state's economic output while maintaining or enhancing environmental contributions, including protection of old-growth forests. On

the other hand, the study also indicates that if a long-term decrease in the state's timber harvest of a billion board feet per year occurred, it could diminish the state's employment and economic output by similar orders of magnitude.

While private working forests are the primary focus of this special report, Oregon's forests will not meet their environmental, economic and social potential without the full participation of federal forestlands in meeting their management objectives.

SEEKING CREATIVE SOLUTIONS

The layperson may see change in forestland use as the inevitable result of population growth, but the consequences are too important to ignore. According to the *Global Forest Resources Assessment 2000* prepared by the United Nations Food and Agriculture Organization, the planet has seen a 50 percent loss of global forests since the advent of agriculture and the population growth it enabled. Just in the U.S., according to the U.S. Forest Service's *Forest Resources of the United States, 1997*, we have seen forestland diminish by about 30 percent since 1600, primarily the consequence of agricultural expansion. Fortunately, new conversations are taking place about ways to keep working forests economically viable.

SEEING FORESTS IN A NEW WAY

In November 2007, OSU's Institute for Natural Resources held a major conference on the future of Oregon's forests entitled, "At the Crossroads." Keynote speaker John Gordon challenged the group to look at forests in a new way



Aside from environmental benefits like water quality and carbon sequestration, keeping the state's working forests economically viable has direct monetary and social benefits for Oregon. The forest sector provides more than 85,000 jobs, many of them in smaller communities around the state. It also contributes some \$22 billion, about 11 percent, to Oregon's economic output.



Constance Best
Managing Director, the
Pacific Forest Trust
San Francisco, Corvallis,
Seattle

"The Pacific Forest Trust exemplifies the role of a growing number of non-governmental organizations in purchasing and managing forestland. We have 12,000 acres in Oregon under our stewardship, making us one of the larger non-industrial forestry operations. We recognize and embrace forestry as a conservation tool. Like all landowners, we have a variety of reasons we own forestlands, but they are all mission driven: buying land threatened with development to sell with a conservation easement; creating a demonstration forest for alternative forest practices that benefit habitat or enhance carbon stores; or buying forests with high ecological but low commercial value. We often use new financial mechanisms in an entrepreneurial way, and in general, seek to complement what the private sector does and push the envelope of forestry and conservation."

Oregon Land Use

Oregon Senate Bill 82, passed in 2005, created the Oregon Task Force on Land Use Planning to evaluate Oregon's land use planning system. The task force was charged with reporting to the governor and legislature on the system's current effectiveness, the roles of state and local governments, and issues related to areas both inside and outside urban growth boundaries. To aid them in their work, the task force asked Matthew Donegan of Forest Capital Partners to prepare a forest landowner's perspective on the public values provided by the state's working forests, economic trends driving land use changes and policy opportunities to preserve working forests.

In a paper entitled "*Preserving Oregon's Working Forests: A Landowner's Perspective on Sustainability*," Donegan developed a four-part framework to guide forestry decisions. This framework presents strategic options to narrow the gap between the values associated with a working forest and the returns presented by alternative land uses. The adjacent box shows the framework and its four component strategies.

A Four-Part Framework for Preserving Working Forests

1. Increase Working Forest Values

Improve Timber Resource Economics

2. Increase Working Forest Values

Improve Non-Timber Resource Economics

3. Decrease Alternative Land-Use Values

Compensate/Incentivize Landowners for Forgoing Fragmentation

4. Decrease Alternative Land-Use Values

Regulate/Restrict Landowners to Prevent Fragmentation

Strategy 1 largely seeks to increase Oregon's global competitiveness through investments in the state's forest cluster.

Strategy 2 seeks to provide financial incentives for the production of non-timber resources and thus augment timber production as the economic engine encouraging forestland retention.

Strategy 3 seeks to compensate landowners who forgo forest fragmentation and/or conversion to keep large-scale working forests intact. Widely used throughout the United States, this concept involves a voluntary transaction in which certain property rights are sold at market value. Transactions may be limited to the sale or lease of development rights. They may also extend to other rights, including public access or restrictions on management practices. Relative to outright public land purchases, this approach is far less expensive and maintains private land ownership, thus protecting property tax revenues.

Strategy 4 seeks to limit forest fragmentation and conversion largely through regulations and legal restrictions.

1. Improving Timber Resource Economics

A key part of Donegan's framework focuses on measures to help Oregon's forest sector remain globally competitive. It includes such things as supporting research and innovation in forest products manufacturing, (e.g., Oregon State University's [OSU] new Wood Innovation Center), supporting new timber market developments such as woody biomass energy programs and supporting forest productivity research and development through programs like that of OSU's Center for Intensive Planted-Forest Silviculture. They also include funding important research programs in forest-related environmental science. For example, OSU and partners in the Watersheds Research Cooperative are building a body of new science to ensure that water and fisheries resources are protected under contemporary forest practices at appropriate regulatory costs. Finally, an important part of the strategy

is maintaining regulatory stability through the Oregon Forest Practices Act, which aids landowners in long-range planning.

2. Innovative Incentives - Improving Non-Timber Resource Economics

Incentive programs offer another vehicle for improving the economic attractiveness of working forests. For example, in 2001, Minnesota passed the Sustainable Forest Incentive Act, providing annual payments to enrolled landowners as an incentive for practicing long-term sustainable forest management. Eligible landowners include private individuals, corporations and partnerships—both residents and nonresidents—with active forest management plans. Another example is the Louisiana Department of Wildlife and Fisheries' tax relief program for private forestland owners. This program is available to landown-

se: A Fresh Look

ers who contribute to Louisiana's wildlife management areas, opening their land to the public for activities such as camping, hiking, bird watching, fishing and hunting.

An incentive program that has been informally proposed in Oregon addresses what have come to be called "ecosystem services." This is a term used to describe environmental values desired by the public and traditionally provided by forests without compensation to landowners. Examples include clean water, fish and wildlife habitat, recreation and carbon storage. Some of the proposals would provide tax incentives for owners who make their forestland available to the public for recreation, for fish and wildlife habitat or for other environmental values served by keeping forestland in forest use rather than selling it for development.

The sale of carbon credits or offsets, which compensate landowners for storing atmospheric carbon, is another example of ecosystem services payments. Oregon and Washington are leaders in efforts to connect carbon offsets to working forests. Forest landowners and forest products producers in the two states have agreed upon a list of elements that forest sector protocols for carbon markets should include. Oregon's governor and state forester have convened a group to develop recommendations on the appropriate role of forests in a "carbon market" as part of the Western Climate Initiative, a regional carbon cap-and-trade framework now under development. The Oregon Legislature created the Oregon Global Warming Commission to coordinate state and local efforts for reducing greenhouse gas emissions in Oregon, including statewide and multi-state carbon cap-and-trade systems and market-based offsets. Oregon's forest sector is active in the Global Warming Commission through representation by Matthew Donegan.

3. Compensating Landowners to Prevent Forest Fragmentation

Another innovative practice involves compensating landowners for permanently giving up development rights. An example of this occurred in Washington State when King County and Hancock Timber Resources Group reached an agreement that will keep the latter's 90,000-acre Snoqualmie Tree Farm near Seattle as a working forest. This was one of the largest public purchases of develop-

ment rights in the nation's history. Without it, zoning regulations could have allowed the forest to be sold and broken into smaller plots for development. In Minnesota, a conservation easement achieved a similar result when the Trust for Public Land and a forest management company, Forest Capital Partners—supported by The Nature Conservancy and the state's Department of Natural Resources—teamed up to retain some 50,000 acres as a working forest while at the same time keeping Forest Capital Partners' land open to the public.

An innovative idea under development by the State of Oregon would allow landowners to transfer development rights from one piece of land to another. For instance, a landowner could be allowed to increase the density of development on some land (for example forestland already impacted by residential uses), in exchange for giving up existing development rights on other land. A system such as this would allow development to proceed in areas where impacts that limit working forests already exist, while keeping the overall working forest land base intact.

4. Regulating Landowners to Prevent Forest Fragmentation

Land use zoning also has been used to restrict development rights. Oregon has traditionally relied on its strong land use planning program to preserve farms and forestland, supported by the stable regulatory climate created by the Oregon Forest Practices Act and a stable tax structure for investments in forestland. According to research by Jeff Kline at the U.S. Forest Service Pacific Northwest Research Station, Oregon's land use laws have been effective in slowing forest conversion.

However, as we look ahead, Oregon's heavy reliance on this single tool, amid significant marketplace changes over the past three decades, cannot be counted on to prevent forestland conversions in the future. This is demonstrated by repeated ballot measures over a period of years related to land use reform.

Given growing concerns about the economic viability of working forests, Oregon's historic reliance on land use regulation alone is not likely to be adequate. As we move forward, we need to be open to new strategies if we are to achieve the goal of keeping working forests as forest.



Steve Zika
Chief Executive Officer,
Hampton Affiliates
Portland

"One of the challenges facing forestry is making people aware of how much 'greener' it is to use wood. Look at the differences between using wood and steel in Oregon, for example. Iron ore is mined in the Great Lakes region, transported a long way, usually to eastern steel mills. Large blast furnaces and high-pressure oxygen convert the ore to steel, consuming an enormous amount of electricity in the process. The steel is then railroaded 2,000 miles across the country to Oregon. Wood is a renewable resource. Virtually the whole log is utilized and products are shipped only 10 to 100 miles to a mill. Local jobs are created and sequestered carbon is still in the product. Yet for all that, you get no more credit for using wood than for using steel."

(complete conference information is available at <http://inr.oregonstate.edu>). Gordon, Pinchot Professor Emeritus, former dean of Yale's School of Forestry and Environmental Studies and member and former chair of the National Commission on Science for Sustainable Forestry, told the professionals gathered at the conference that we need to stop looking at our forests as simply producers of a range of products from timber to mushrooms. "We should rather view them as a dynamic stream of captured sunlight to be allocated to maintain forest health and serve human purpose," he said.

Plants convert sunlight to a stream of chemical energy that helps provide a whole range of ecosystem services, such as watershed and groundwater protection, carbon storage, biodiversity protection, recreation and others. To keep that process working efficiently, Gordon said, we need "to integrate management actions and manage across boundaries, particularly public/private boundaries. State governments need to be empowered to manage forests and particularly ecosystem services in a coordinated way." He proposed establishing a federal fossil fuel carbon tax, the proceeds of which would then be returned to the states. A \$10-per-ton carbon tax, for example, could raise \$55 billion a year. Some \$50 billion could reduce income taxes and still leave \$100 million per state to buy ecosystem services. "This would place them in an ideal position to provide tax incentives—a useful tool—to manage forests and buy ecosystem services," Gordon said.

Gail Kimbell, chief of the U.S. Forest Service, also a keynote speaker at the Crossroads conference, echoed warnings about the loss of forests and open space to development, listing it as one of four areas of concern to the Forest Service. The other three—improving forest health to reduce fire risk, controlling invasive species and better managing outdoor recreation—are major concerns in Oregon as well. Kimbell—no stranger to Oregon Forestry with a degree from OSU and early career positions in the Medford, Detroit and La Grande areas—also spoke of longer-term challenges to the nation's forests. She pointed out potential changes to Oregon's forests from climate change, emphasizing the value of forests as carbon "sinks," and the need to help forests adapt to inevitable changes. Kimbell also stressed the connection between healthy forests and clean water supplies, and she called for connecting children to nature so that future generations will see the need—and have the ability—to protect forested watersheds in an era of climate change.

What the Future Holds

Conference speaker Hal Salwasser, dean of the OSU College of Forestry and the conference's final speaker summarized the current crossroads for forestry with

a question: “How can we change the historic struggle over forest values to one of a search for common ground for a richer future for Oregon’s forests?” He characterized the past two decades as a period of federal forest wars which had major consequences for both public and private working forests. As described earlier in this report, the Northwest Forest Plan of the early 1990s removed most federal lands west of the Cascades crest from harvest, devastating many small forest-related communities and shifting the west-side harvest almost exclusively to private land. Salwasser said that the Plan’s designers acknowledged at the outset that it was not intended to be sustainable over the long-term without periodic adjustments. “It is now time,” he said, “to reexamine it in light of our current understanding of ecosystem dynamics, scientific research and our changing social values.”

Salwasser also made a case for a comprehensive reexamination of federal forest policy. “The notion that natural resources desired by people,” he said, “in Oregon or elsewhere, can be preserved in local places without causing impacts in another place, or later in time at the same place, still persists, while most deep-thinking individuals know full well that preserving something in one place while making no change in consumption behavior merely transfers the impacts of production to another place.”

“The future—for forests and for people—will differ sharply from the past,” Salwasser concluded. “Going back, dreamed of by some, is not a possibility. U.S. forest area per capita in 1850 was 40 acres per person; it was 4 acres by 1950, and is projected to be around 1.8 acres by 2050. We have no realistic or ethical choice other than to learn how to share those forestlands. We need new, integrated policies and must work together to get the best combination of forest benefits from each forest type and from each forest ownership, knowing that what we receive from each must differ, yet in sum satisfy all needs. We can choose a path to make that happen, we can try to stop it from happening, or we can choose to stay in the crossroads and scratch our heads as we wonder what just ran over us.”



Gary Lettman
Principal Forest Economist
Oregon Department of
Forestry
Salem

“Losing forestland to development and other non-forest uses is high on the list of concerns to Oregonians. Yet conversion of forestland is already occurring here, although at a slower pace than if we didn’t have land use planning. Unfortunately, many Oregonians do not understand the relationship between having adequate wood processing infrastructure and the state’s ability to keep forests as forestland. Without mills and other manufacturing facilities, the thinning and other forest restoration work needed to maintain healthy forests, will not be economically viable. This is a particularly difficult problem in eastern Oregon where only about 10 sawmills remain. Small diameter logs from forest restoration could help preserve needed infrastructure, provide fiber for biomass energy and make important economic contributions to depressed rural communities.”



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Acknowledgments

The Oregon Forest Resources Institute is grateful to the experts who participated in the “At the Crossroads” conference on the future of forestry, held at Oregon State University in November 2007. Many of the concepts and ideas in this report are drawn from their presentations.

Project Management:

Editorial/Project Management: Feinstein Group, Ltd.
Design: Joseph Erceg Graphic Design
Production: Matt Erceg
Photography: Cover. Bruce Forster/Viewfinders;
Page 2, J.R. Rochelle; Page 8, Jordan Benner.
All other photography by Michael and Josh Feinstein

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 Printed with soy-based ink on recycled paper 0608