



THE
WILDERNESS
SOCIETY

America's Roadmap to Cost Savings, Jobs & Clean Water

The Legacy Roads and Trails Remediation Initiative

"Given the reality of a very large and under-maintained system leading to sediment-laden streams and impacted communities, we are heartened that Secretary Vilsack identified road decommissioning and watershed protection as a major priority."

- US Conference of Mayors, December 2009

"The forest road system is convoluted and unmanageable; fails to meet the needs of our nation; and places a tremendous burden on taxpayers, with backlogged maintenance over \$10 billion dollars and growing."

-Taxpayers for Common Sense, September 2009

Forest Service Road System

- 375,000 miles – enough to circle Earth 15 times
- Primary source of pollution into streams
- A legacy from last century
- Not meeting the 21st century recreation and other management needs

Expensive

- Multi-billion dollar road maintenance backlog and growing¹
- 5 times larger than available maintenance resources²



Road washout in the Stanislaus National Forest in California. Unmaintained culverts can lead to road blowouts which results in recreational users losing access to popular destinations. Additionally, many of the agency's roads are unused and unneeded old dirt logging roads. These roads are rarely maintained leading to massive erosion which washes sediment downstream suffocating fish and clogging community water treatment plants. Photo: Central Sierra Environmental Resource Center

¹ Over the past few years, the USFS has released several conflicting estimates of their road maintenance backlog including, \$5.2 billion in 2000, \$8.1 billion in 2000, and \$4.1 billion in 2007. U.S. Department of Agriculture. Response to Six Questions Contained in June 29, 2007 Letter From Senator Cantwell, Senator Murray, Representative Dicks, Representative Baird, Representative Larsen, and Representative Inslee To The Honorable Mike Johanns, Secretary of Agriculture. October 4, 2007. Available online at <http://www.wildlandscpr.org/files/NFSroadsresponse.pdf>.

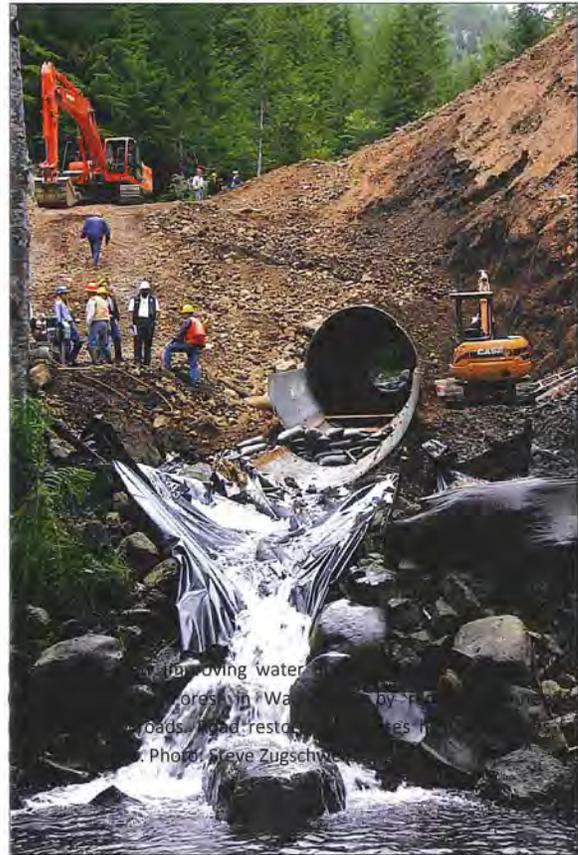
² Wildlands CPR. (2009). Managing the Miles: A Review of Forest Service Policy and Practices. WCPR found that the Forest Service maintains roughly 20% of its road system annually and only 20-30% of the roads meet their assigned maintenance levels. To calculate annual road maintenance capabilities, WCPR used data from USDA Forest Service Roads Accomplishment Reports, which are available on Wildlands CPR's website at <http://www.wildlandscpr.org/2006-and-2007-road-accomplishment-reports-rars>.

Polluting Water

- 66 million people and 3,400 communities rely on national forests for their drinking water³
- Recreational fishing industry depends on clean water and healthy streams
- The costs of the decaying road system falls disproportionately on these communities, which are mostly rural

The Solution – Legacy Roads and Trails Remediation Initiative

- Created in 2007 to reclaim unneeded, fiscally draining, and environmentally problematic roads and trails
- Between 2008 and 2010, \$179.4 million was appropriated to improve 659,600 acres of habitat and restore 3,147 miles of stream nationally⁴
- Creates or retains annually between 1,197 and 1,548 direct and indirect jobs across the country (based on 2010 appropriations)⁵
- Lowers long-term cost of maintaining the road system
- Improves access to important recreation destinations
- Reduces pollution in America’s rivers and drinking water



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Legacy Roads and Trail Remediation Fund Achievements Nation-Wide, 2008-10

Fiscal Year	Funds Appropriated (millions)	Miles of System and Unauthorized Roads Decommissioned	Road and Trail Miles Maintained or Improved	Number of Sites where Fish Passage was Restored	Number of Bridges Replaced or Repaired	Jobs Created or Retained
FY 2008	\$39.40	531	3,035	180	15	Total FY2010: 1,197 - 1,548
FY 2009	\$50	929	2,783	145	23	
FY 2010	\$90	1,509	4,109	261	75	
Total	\$179.40	2,969	9,927	586	113	

³ Sedell, J.; Sharpe, M.; Dravieks-Apple, D.; Copenhagen, M.; Furniss, M. 2000. Water and the Forest Service. FS-600. Washington, DC: U.S. Department of Agriculture, Forest Service.

⁴ The Wilderness Society used U.S. Forest Service’s LRTI national reporting summaries for actual and projected accomplishment for FY08-FY10 to arrive at these figures.

⁵ U.S. Forest Service economists developed the Treatment for Restoration Economic Analysis Tool (TREAT) to estimate the economic impact from Collaborative Forest Landscape Restoration Project funding. This model was applied to Legacy Roads and Trails Initiative funding to estimate job creation potential. After applying the model to every Forest Service Region, and taking the lowest and highest job creation estimates, we found that 13.3 to 17.2 total direct and indirect jobs are created per million dollars invested. The reasonableness of the range is supported by numerous recent economic studies. TWS applied this range to the \$90 million allocated in FY2010 to arrive at this estimate.

Testimony of Ernie Niemi

**To the Subcommittee on National Parks, Forests & Public Lands oversight field hearing,
"Failed Federal Forest Policies: Endangering Jobs, Forests and Species."
May 21, 2012**

**The Economic Importance of Federal Forests to the Pacific
Northwest's Economy**

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I. Introduction and Summary

My name is Ernie Niemi. I am testifying on my own behalf before the Subcommittee.

For more three decades I have analyzed the relationship between federal forests and the economy of the Pacific Northwest, as a Senior Economist with ECONorthwest, the oldest and largest independent economic consulting firm in the Pacific Northwest. I live and work in Eugene, Oregon, but have conducted economic research on natural resource management issues throughout the United States and in other countries.

I encourage the Subcommittee, when considering the effects of federal forest policy, to consider the diverse nature of the relationship between federal forests and the economy of Oregon and Washington. In particular:

1. This region's federal forests produce many valuable goods and services that make important contributions to the economic well-being of workers and families, to the productivity of businesses, and to the economic outlook of communities, both rural and urban. These goods and services include wood fiber for the wood-products industry, clean water for communities, mitigation of potential flood damage for downstream property owners, habitat for fish and wildlife, recreational opportunities, the sequestration of carbon from the atmosphere, and many more.
2. This region's federal forests also generate jobs and incomes in many different ways. Not just through the production of products, such as logs for the timber and bio-energy industries, but also through the production of services, such as delivering clean water that lowers the cost of living and doing business in the region, recreational opportunities that support jobs in the tourism industry, and scenic amenities that attract productive workers, entrepreneurs, and investors.
3. Any policies regarding the management of the region's federal forests will have both positive and negative effects on the economy. With a change in policy, some residents of Oregon and Washington will see their economic welfare and job opportunities increase, others will experience a decrease.

All these dimensions of the relationship between this region's federal forests and its economy must be fully accounted for before one can reasonably conclude that the existing forest-management policies have failed, or succeeded. Similarly, all of these dimensions must be considered before concluding that new policies would, on balance, enhance or diminish the federal forests' contribution to the Pacific Northwest's economy.

II. Federal Forests Provide Many Economically Important Goods and Services

From an economic perspective, the Pacific Northwest's federal forests are important not in and of themselves but because they provide goods and services that increase the quality of life for the region's residents and visitors. The list of these goods and services is long and growing, as ecological scientists learn more about the inner workings of the federal forests and people learn more about how they derive benefits from them. Figure 1 provides an illustrative list. Consistent with widely accepted professional standards, this list includes a broad suite of goods and services, including those whose value comes from direct use of forest resources, such as logging, indirect use, such as purification of stream water, or non-use, such as occurs when

people are willing to pay to protect forest characteristics for future generations (USEPA 2000, National Research Council 2004, USEPA 2009). The list may expand or contract depending on the results of future research and changes in human preferences.

A product from a forest is considered an economically important good or service only if humans derive a benefits from it and have a demand for it. Throughout this discussion, I recognize that humans are part of the forest ecosystem; they affect the amount of natural capital in federal forests, the workings of forest processes, and, hence, its ability to provide a set of goods and services.

Figures 2, 3, and 4 illustrate some of the goods and services provided by this region’s federal forests. Figure 2 shows the extent to which all forests are currently protecting areas important to the supply of drinking water. The most intense areas in Oregon and Washington are located on federal forests. Forest cover can explain 50 percent of differences in water-treatment costs for

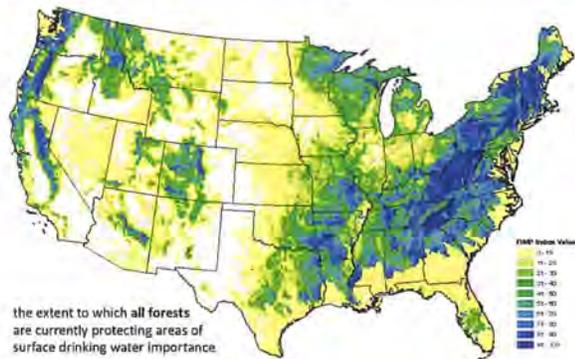
Figure 1. Illustrative List of Goods and Services Derived from Federal Forests

Forest Processes		Examples of Goods and Services Produced
1	Production and regulation of water	Natural and human-built features of the forest capture precipitation; filter, retain, and store water; regulate levels and timing of runoff and stream flows; and influence drainage.
2	Formation & retention of soil	Forests accumulate organic matter, and prevent erosion to help maintain productivity of soils.
3	Regulation of atmosphere & climate	Forest biota produce oxygen, and help maintain good air quality and a favorable climate for human habitation, health, and cultivation.
4	Regulation of disturbances	Forest wetlands and reservoirs reduce economic flood damage by storing flood waters, reducing flood height, and slowing a flood’s velocity.
5	Regulation of nutrients and pollution	Forest wetlands and riparian vegetation trap pollutants before they reach streams and aquifers; natural processes improve water quality by removing pollutants from streams.
6	Provision of habitat	Forest wetlands, riparian vegetation, streams, and reservoirs provide habitat for economically important fish and wildlife.
7	Food production	Forest biota convert solar energy into plants and animals edible by humans.
8	Production of raw materials	Forest biota generate materials for construction, fuel, and fodder; streams possess energy convertible to electricity.
9	Pollination	Insects facilitate pollination of economically important wild plants and agricultural crops.
10	Biological control	Forest-related birds and microorganisms control pests and diseases.
11	Production of genetic & medicinal resources	Genetic material in wild plants and animals provide potential basis for drugs and pharmaceuticals.
12	Production of ornamental resources	Products from forest-related plants and animals provide materials for handicraft, jewelry, worship, decoration, and souvenirs.
13	Production of aesthetic resources	Forest wetlands, riparian vegetation, streams, and reservoirs provide basis for enjoyment of scenery from roads, housing, parks, trails, etc.
14	Production of recreational resources	Forest scenery, streams, reservoirs, riparian vegetation, fish, waterfowl, and other wildlife provide basis for outdoor sports, eco-tourism, etc.
15	Production of spiritual, historic, cultural, and artistic resources	Landscapes serve as basis for spiritual renewal, focus of folklore, symbols of group identity, motif for advertising, etc.
16	Production of scientific and educational resources	Forest wetlands, riparian vegetation, streams, and reservoirs provide inputs for research and focus for on-site education.

Source: Adapted by ECONorthwest from various sources.

communities in forested versus nonforested watersheds, and, for every 10 percent increase in

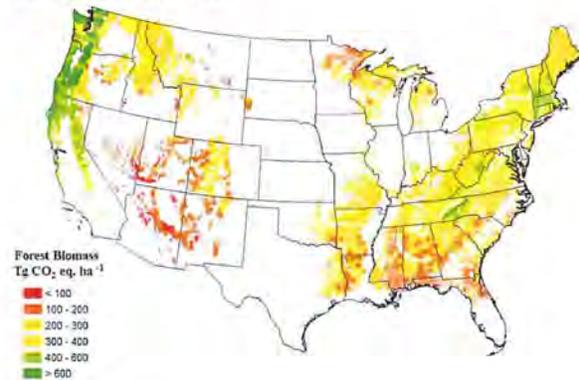
Figure 2. Federal Forests Provide Protection for Drinking Water in the Pacific Northwest



Source: Todd and Weidner (2010).

Figure 3. Federal Forests Exhibit the Highest Carbon Stocks

U.S. Forest Carbon Stocks in 2005



Source: Stein et al. (2009).

forest cover, treatment and chemical costs decrease by 20 percent, with these benefits maximized at 60 percent forest cover (The Trust for Public Land et al. 2002). The map in Figure 3 similarly shows that the greatest sequestration of carbon, represented by the amount of biomass also occurs on federal forests.

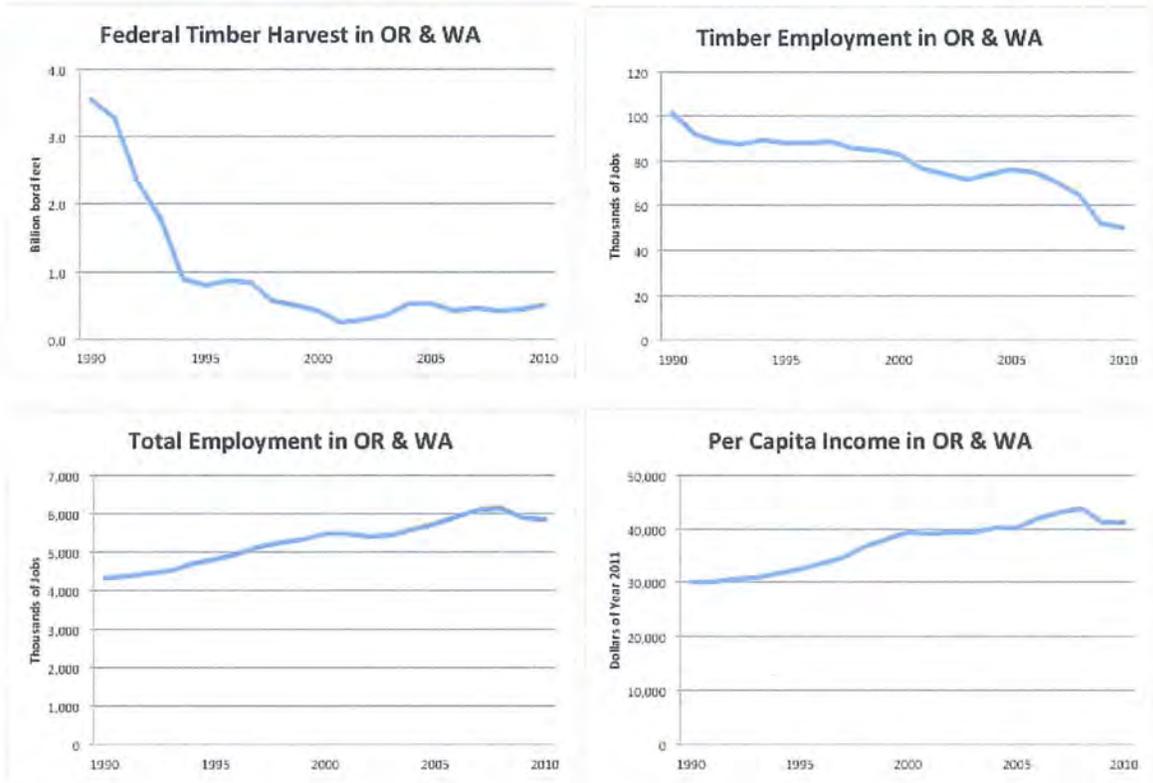
The federal forests of this region cannot be managed to increase the output of all goods and services at the same time. Increasing the output of one set will decrease the output of another. A change in management policies for the region's federal forests would improve the economic well-being of current and future generations only if it would increase the net economic value of all the different types of goods and services produced by the forests on a sustained basis. When weighing the potential change in the net economic value, it is important to consider all the different ways in which society imputes a value to forest goods and services: through direct use, indirect use, and non-use.

III. Federal Forests Generate Jobs and Income in Different Ways

Many residents of this region can remember when federal forests generated jobs primarily through the timber industry. Logging and milling operations provided jobs for workers and supported communities, large and small, dispersed throughout the region. The implementation of the Northwest Forest Plan was accompanied by widespread fear that not just jobs and incomes in the timber industry but the overall the overall regional economy would collapse. The collapse never occurred. Figure 4 shows that, although the amount of timber harvested from federal lands in Oregon and Washington fell by about 90 percent in the 1990s, overall employment in the timber industry declined by only about 30 percent, while total employment and per capita income increased by about one-third. These trends have continued. They strongly suggest that future logging on federal forests will generate fewer jobs and lower

incomes, and have less of an impact on the overall economy than in the past. This conclusion applies especially to small, rural communities. Figure 5 shows that the timber industry has shifted away from a large number of relatively small sawmills dispersed across the region to a smaller number of mills capable of processing large volumes of timber.

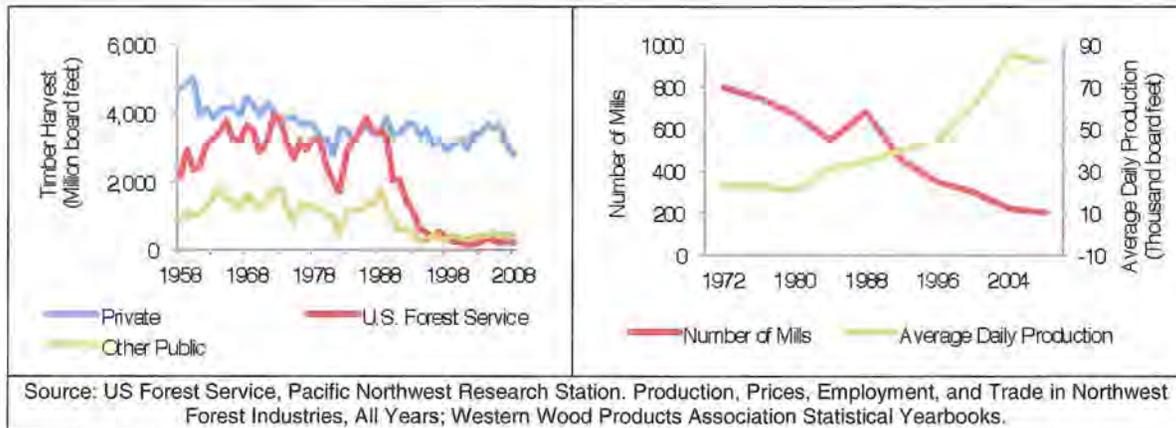
Figure 4. Changes in Federal Log Harvest, Timber-Industry Employment, Total Employment, and Per-Capita Income, Oregon and Washington



Source: ECONorthwest, with data from Oregon Department of Forestry (2011), Washington Department of Natural Resources (2011), and Bureau of Economic Analysis (2012).

Figure 5. Historical Characteristics of Oregon's Timber Industry

Oregon Timber Harvest by Ownership (1958–2008)	Number of Sawmills and their Average Daily Production (1972–2007)
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In today's economy, federal forests generate jobs and income primarily by providing recreational opportunities and other amenities that attract workers, families, entrepreneurs, and investors. The overall economic power of amenities, of all types, is indicated by the findings of research on differences in job growth among the 50 states to distinguish between the two growth processes (Partridge and Rickman 2003). The researchers concluded that industry-driven and amenity-driven growth have roughly the same impact on job growth. This finding indicates, at a minimum, that federal forests may have a greater influence on jobs and income through their amenities and their influence on household-location decisions rather than through the production of logs. This expectation is reinforced by research showing that communities close to undeveloped public lands have experienced faster population growth than those lacking these amenities. (Power et al. 2001 and Kim et al. 2005).

Federal forest generate some jobs and income through direct consumption of recreational amenities. In Oregon, in 2006, the last year for which these data are available, outdoor recreation accounted for 73,000 jobs, \$310 million in state tax revenue, and sales that represented 3.4 percent of the state GDP (Outdoor Industry Foundation 2006a). During the same year, the outdoor recreation industry created 115,000 jobs in Washington, \$650 million in state tax revenue, and sales that accounted for 3.5 percent of the state GDP (Outdoor Industry Foundation 2006b). Much of this recreation occurred on or was dependent on federal forest lands.

Restoration of ecosystems damaged by past management of federal forests also can generate significant jobs and income. For example, a recent report shows that, for every \$1 million invested in restoration projects, 15.7-23.8 jobs are created in Oregon directly and indirectly, with average payroll costs per worker ranging between \$31,000 and \$55,000 annually (Nielsen-Pinkus and Moseley 2010). The total economic output of the same \$1 million investment ranges between \$2.2 million and \$2.5 million. The reason for the high multiplier effects of investments in forest and watershed restoration projects is that 95-99.5 percent of the initial investment goes towards hiring Oregon-based businesses for contracted work. The indirect impacts on the state's economic output from these types of projects range between about \$735,000 and \$985,000 for every \$1 million spent on restoration.

IV. Any Change in Federal Forest Policy Will have Both Positive and Negative Impacts on the Economy

The demands for goods and services produced by this region's federal forests far exceed the supply. As a consequence, competition—for resources, land-uses, goods, and services—is an essential characteristic of the relationship between federal forests and the Pacific Northwest's economy (Niemi and Whitelaw 1999).

Some of this competition occurs over short time periods. Changes in the amount of logging on federal lands, for example, might alter the price of logs in the regional log market, and induce off-setting effects on logging on other lands. A marked increase in federal log production, for example, might depress log prices so that private landowners receive less for the logs they sell to the market. Or, if activities on federal lands that are the headwaters for municipal water supplies result in higher levels of sediment in the water, the businesses and households will incur additional costs to remove it. This added cost can reduce the funds businesses have available for new investment and force households to reduce their local spending, resulting in further reduction in business investment.

Many of the overall effects on the regional economy of changes in the competition for federal forests play out over longer time periods. Past experience suggests that using federal lands as a source of logs for the timber industry will continue to exhibit a declining ability to generate increases in jobs and incomes, while using these lands as a source of amenities attractive to workers, entrepreneurs, and investors will continue to exhibit a rising ability to generate economic growth. Actions today that increase the supply of logs but reduce the attractiveness of amenities thus can have an overall negative effect on economic growth for decades, an effect that may intensify over time.

V. References

Bureau of Economic Analysis. 2012. *State Annual Personal Income & Employment*. Retrieved May 19, 2012 from <http://www.bea.gov/regional/index.htm>

Kim, K.-K., D.W. Marcouiller, and S.C. Deller. 2005. "Natural Amenities and Rural Development: Understanding Spatial and Distributional Attributes." *Growth and Change* 36 (2): 273-297.

Nielsen-Pincus, M. and C. Moseley. 2010. *Economic and Employment Impacts of Forest and Watershed Restoration in Oregon*. Institute for a Sustainable Environment, University of Oregon. Spring. Retrieved May 17, 2012, from <http://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/downloads/WP24.pdf>

Niemi, E., and E. Whitelaw. 1999. *Assessing Economic Tradeoffs in Forest Management*. U.S. forest Service, Pacific Northwest Research Station, General Technical Report PNW-GTR-403. July.

Oregon Department of Forestry. 2011. *25-Year Harvest History Data (1986-2010)*. Retrieved May 19, 2012 from http://www.oregon.gov/ODF/STATE_FORESTS/FRP/Charts.shtml

Outdoor Industry Foundation. 2006a. *The Active Outdoor Recreation Economy Report: Oregon*. Retrieved May 18, 2012, from <http://www.outdoorindustry.org/pdf/OregonRecEconomy.pdf>

Outdoor Industry Foundation. 2006b. *The Active Outdoor Recreation Economy Report: Washington*. Retrieved May 18, 2012, from <http://www.outdoorindustry.org/pdf/WashingtonRecEconomy.pdf>

Power, T.M. and R.N. Barrett. 2001. *Post-Cowboy Economics: Pay and Prosperity in the New American West*. Island Press.

Stein, S.M., R.E. McRoberts, L.G. Mahal, M.A. Carr, R.J. Alig, S.J. Comas, D.M. Theobald, and A. Cundiff. 2009. *Private Forests, Public Benefits: Increased Housing Density and Other Pressures on Private Forest Contributions*. Gen. Tech. Rep. PNW-GTR-795. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. p. 41 Retrieved 8 November 2010 from http://www.fs.fed.us/openspace/fote/benefits_files/pnw-gtr795_pt3.pdf.

Todd, A.H. and E. Weidner. 2010. "From Forest to Faucet: Drinking Water as and Ecosystem Service." Presentation to *ACES: A Community of Ecosystem Services, Gila River Indian Community, Arizona*. December 6. Retrieved 2 June 2011 from <http://conference.ifas.ufl.edu/aces/Presentations/Tuesday/Plenary%20D-G/pm/Yes/0430%20A%20Todd.pdf>.

The Trust for Public Land and American Water Works Association. 2002. *Protecting the Source*. Retrieved May 19, 2012, from http://cbey.research.yale.edu/uploads/Conservation%20Finance%20Camp%202011/agenda/Tuesday/protecting_the_source_04-1.pdf

U.S. Forest Service, Pacific Northwest Research Station. various years. *Production, Prices, Employment and Trade in Northwest Forest Industries*.

Washington Department of Natural Resources. 2011. *Washington State Timber Harvest*. Retrieved May 19, 2012 from http://www.dnr.wa.gov/BusinessPermits/Topics/EconomicReports/Pages/obe_washington_timber_harvest_reports.aspx

Mitch Friedman
Executive Director
Conservation Northwest

Testimony on Failed Federal Forest Policies: Endangering Jobs, Forests and Species
May 21, 2012

I am Mitch Friedman, a biologist and Executive Director of Conservation Northwest. I have been involved in federal forest issues since 1985. I believe that the path forward on federal timber policy is clear and full of opportunity if we apply the leadership and resources to follow it.

In the mid 1980's, prior to founding Conservation Northwest, I was a organized many protests against logging of ancient forest, including the first protest to protect spotted owls. My past is also full of appeals and lawsuits on these issues.

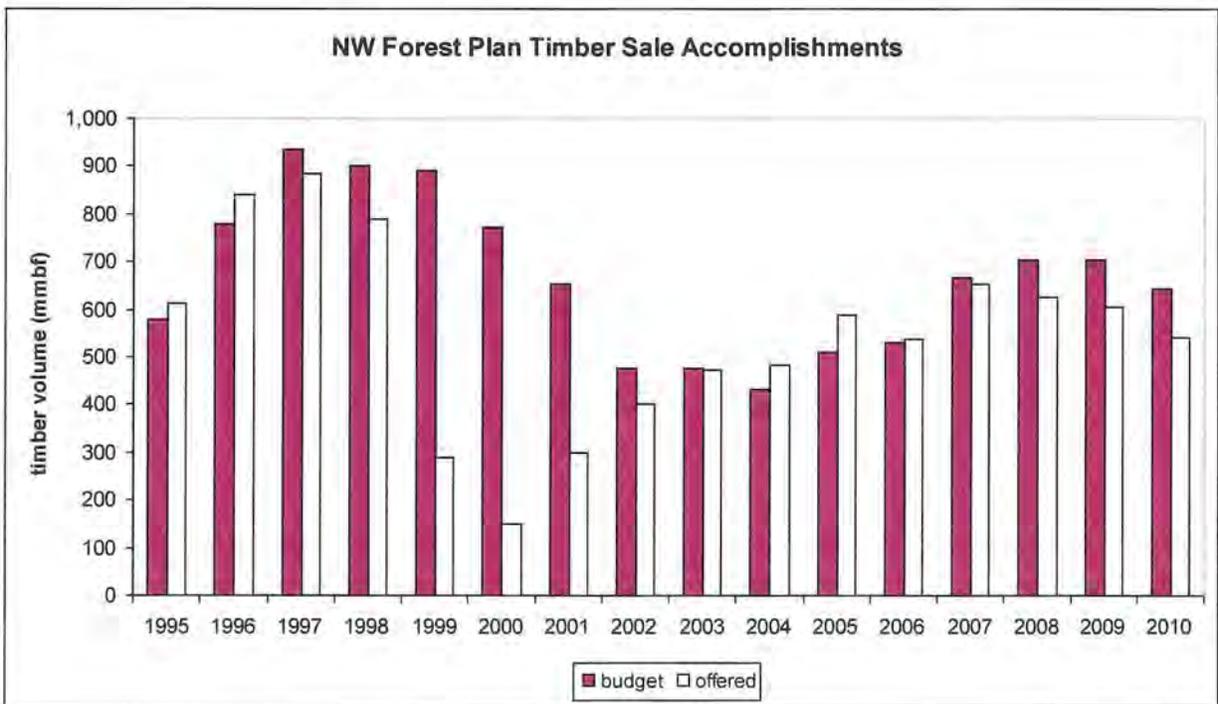
About a decade ago, we at Conservation Northwest changed our approach. We observed that few people, even in the timber industry, any longer favored logging old growth. We took the opportunity to explore common ground to benefit ecological and human communities.

Conservation Northwest engaged fully in one of the first novel collaborations in the West, here on the Gifford Pinchot National Forest. A group of dedicated and diverse stakeholders transitioned the Forest Service away from clearcutting big, old trees by promoting beneficial thinning projects in stands of second growth. Appeals and lawsuits ended, timber flowed, ecosystems and recreation benefited: A win-win-win.

Conservation Northwest is based in Bellingham and employs field associates in rural forest communities throughout the region. We have at least scrutinized most major national forest projects across the state for two decades. Today we are most heavily invested around the Colville National Forest, where we are a core partner in the Northeast Washington Forestry Coalition. This collaboration is behind the success of about 30 projects over eight years without environmental controversy. This work is now expanding thanks to a million dollar/year grant from the Collaborative Forest Landscape Restoration Program.

The collaborations we are involved in are real. They include people with whom we once battled but have reached accords in how we view forests and management. Collaboration builds trust and a culture of problem solving. When confronted with a new challenge, the process involves civil and genuine effort to identify common interests, evaluate science sometimes with the aid of experts, and eventually reach agreement and action. **I have witnessed collaborative groups reach agreement to address objectives like wildfire fuels management, spotted owl habitat, threats to forest and watershed health, and even wilderness protection.** I invite you to take a field trip to see projects created by the Pinchot Partners or Northeast Washington Forestry Coalition, and observe how collaboration is working.

My experience is not the exception, but is now typical across the region. Federal forests in the West are producing as much timber as they are budgeted for, and doing so with much less controversy or litigation expense than in past. This graphic compares budgeted targets and volume offered for the Forest Service and BLM in WA, OR and CA over a fifteen year period.



If Congress provided more funds, the agencies could produce more controversy-free timber, notwithstanding protections for owls, salmon and other important values. Conservation Northwest and other groups will soon release a commissioned study that provides detailed estimates of uncontroversial timber available on Northwest federal lands. **Federal timber volumes can be increased substantially without reducing environmental safeguards, cutting special areas, building new roads, or otherwise harming our natural heritage.**

If Congress wants more timber cut from federal land, you need only invest more funds and allow ecological protections and collaborative groups to guide those funds into most beneficial projects.

On the other hand, efficiency can be improved in federal environmental analysis and contracting procedures to provide better return on investment for the Treasury and communities. The agencies have become somewhat risk averse, and are generally following the same NEPA approach for popular restoration projects as they would to clearcut old growth. Many stakeholders want reform and innovation, and are working for it through pilot projects under authorities like the Collaborative Forest Landscape Restoration Act, Proof of Concept, and others. **I am confident that efficiency can be increased without reducing collaboration or robust protections for water, wildlife and other public resources.**

With regard to constraints on timber production and jobs in the region, the 800 pound gorilla is the market. The economy remains sluggish and housing starts are a third of their boom level. British Columbia continues to dump subsidized softwood. Domestic timber prices are therefore so weak that some federal timber sales have no bidders.

The strong markets are overseas. Private lands are now being logged very aggressively to meet demand in China, Japan, and other Pacific markets. Almost 20% of the logs cut in Washington and Oregon are exported whole, a volume that is 2.5 times that cut from federal lands here. Those exported logs are from private lands and touch the hands of few American workers.

I get the concerns of mill owners and workers. But the reasons that loaded trucks bypass them on the way to export yards do not include protections for spotted owls or other natural resources. I think it is wise for the committee explore ways to boost economic activity and timber jobs. The best opportunities for doing so are addressing raw log exports and investing more in programs like the Collaborative Forest Landscape Restoration Act that help communities by improving our forests and watersheds.

Policy should be based on a review of what is working. **Presently we have less conflict and controversy on our federal lands than we've had in decades. That is the result of land management policies that protect our assets and collaborations that identify common ground and build long term community equity.**

By staying the course on these successful principles while also exploring ways to improve returns on federal investment, we can provide a strong foundation for growth in timber jobs as the economy recovers, and improve the health of our forests and rural communities while protecting the landscapes, streams and wildlife that make our region great.

