

including increased and/or stable timber harvests, can have a substantive impact on community stability.

Recommendation: BLM re-consider its ability to make meaningful contributions to the local or regional economic stability by additional logging activity.

References:

- A. Andrews, K. Kutara. Oregon's Timber Harvests: 1849-2004. Oregon Department of Forestry. Salem, OR (2005).
- T. Beechie, B. Collins, M. Pollock, G. Pess, Watershed-Scale Patterns of Stream Temperature Change in a Puget Sound River Basin, Northwest Fisheries Science Center, National Marine Fisheries Service. (2000).
- W. Beyers, D. Lindahl. Lone Eagles and High Flyers in Rural Producer Services. Rural Development Perspectives. (1996) 2-10.
- K. Brosofske, J. Chen, R. Naiman, and J. Franklin, Harvesting effects on microclimatic gradients from small streams to uplands in western Washington, Ecological Applications. 7 (1997) 1188-1200.
- P. Berck, C. Costello, L. Fortman, S. Hoffman. Poverty and Employment in Forest-Dependent Communities, Forest Science. 49 (2003) 763-777.
- D.A. Burton. An Astructural Analysis of National Forest Policy and Employment, American Journal of Agricultural Economics. 79 (1997) 964-974.
- D.A Burton, P. Berck. Statistical Causation and National Forest Policy in Oregon, Forest Science. 42 (1996) 86-92.
- J. Bliss. Sustaining Family Forests in Rural Landscapes: Rationale, Challenges, and an Illustration from Oregon, USA. Small-scale Forest Economics, Management, and Policy. 2 (2003) 1-8.
- T. Cameron, W. Shaw, S. Ragland, M. Callaway, S. Keefe. Using actual and Contingent Behavior with Differing Levels of Time Aggregation to Model Recreation Demand, Journal of Agricultural and Resource Economics. 21 (1996) 130-149.
- R. Carson, R. Mitchell. The Value of Clean Water: The Public's Willingness to Pay for Boatable, Fishable, and Swimmable Quality Water. Water Resources Research. 29 (1993) 2445-2454.

- B. Casper. Effect of Logging Incident on City's Drinking Water Spotlights Forest Rules. Statesman Journal. January 28, 2007.
- Chicago Climate Exchange. CCX Market Report. iv (September 2007).
- P.S. Corn, R. Bury. Logging in Western Oregon: Responses of Headwater Habitats and Stream Amphibians. Forest Ecology and Management. 29 (1989) 39-57.
- G. Daily (Ed), Natures Services: Societal Dependence on Natural Ecosystems. Island Press. Washington, D.C. (1997).
- S.E. Daniels, W.F. Hyde, D.N. Wear, Distributive Effects of Forest Service Attempts to Maintain Community Stability. Forest Science. 37 (1991) 245-260.
- M. Dombeck, J. Thomas. Declare Harvest of Old-Growth Forests Off-Limits and Move On. Seattle Post Intelligence. (August 24, 2003).
- C. Doss, S. Taff. The Influence of Wetland Type and Wetland Proximity on Residential Property Values. Journal of Agricultural and Resource Economics. 21 (1996) 120-129.
- K. Duffy-Deno. The Effect of Federal Wilderness on County Growth in the Intermountain Western United States. Journal of Regional Science. (1998) 109-136.
- J. Englin, R. Mendelsohn. A Hedonic Travel Cost Analysis for Valuation of Multiple Components of Site Quality: The Recreation Value of Forest Management. Journal of Environmental Economics and Management. 21 (1991) 275-290.
- ECONorthwest. The Economic Benefits of Old-Growth Forests in the Pacific Northwest: An Overview. Eugene, OR (2006).
- Friend of the Forest. Forest Service and NFF Combat Climate Change. <http://www.becomeafriend.org/news/news-59.html> (accessed November 13, 2007)
- Forest Ecosystem Management Assessment Team (FEMAT) Forest Ecosystem Management: An Ecological, Economic, and Social Assessment (1993).
- J. Franklin, T. Spies, Composition, Function, and Structure of Old-Growth Forests. in L. Ruggiero, K. Aubry, A. Cary, and M. Huff (Eds.). Wildlife and Vegetation of Unmanaged Douglas-Fir Forests, U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, Portland, OR (1991)
- A.M. Freeman III. The Measurement of Environmental and Resource Values: Theory and Methods. Resources for the Future, Washington, D.C. (2003).

- P. Fattig. Much BLM Timberland Tied Up in Lawsuits. Mail Tribune. October 22, 2007.
- R. Fredrickson, D. Moore, L. Norris. The Impact of Timber Harvest, Fertilization and Herbicide Treatment on Water Quality in Western Oregon and Washington, in B. Bernier and C. Winget (Eds) Forest Soils and Forest Land Management, Proceeding of the North American Forest Soils Conference. (1973).
- B. Garber-Yonts, J. Kerkvliet, R. Johnson. Public Values for Biodiversity Conservation Policies in the Oregon Coast Range. Forest Science. 50 (2004) 589-602.
- M. Gearheard. Letter to Ren Lohofener, U.S. Fish and Wildlife Service regarding Draft Recovery Plan for the Northern Spotted Owl and attached detailed comments. August 2007.
- Governor's Advisory Group on Global Warming. Oregon's Strategy for Greenhouse Gas Reductions. State of Oregon. (2004).
- G. Grant, A. Wolff. Long-term Patterns of Sediment Transport After Timber Harvest , Western Cascade Mountains, Oregon, USA, Sediment and Stream Water Quality in a Changing Environment: Trends and Explanation. Proceedings of the Vienna Symposium (1991).
- B. Hall. Foresters Propose Climate Tactics. Gazette Times. (November 6, 2007)
- E. Hansen. OSU Extension Service News. Oregon State University. November 30, 2003.
- M. Harmon, W. Ferrell, J. Franklin. Effects of Carbon Storage of Conversion of Old-Growth Forests to Young Forests. Science 247 (1990) 669-702.
- R. Harr. Fog Drip in the Bull Run Municipal Watershed, Oregon. Water Resources Bulletin. 18 (1982) 785-789.
- R. Haynes, A. Horne. Economic Assessment of the Basin. in T. Quigley and S. Arbelbide (Eds.) An Assessment of the Ecosystem Components in the Interior Columbia Basin and Portions of the Klamath and Great Basins. General Technical Report. US Department of Agriculture. Forest Service. Pacific Northwest Experiment Station. PNW-GTR-405. (1997) 1715-1869.
- T. Helvoigt, S. Grosskopf. Productivity Growth, Technical Efficiency, and Returns to Scale in the Washington State Sawmill Industry. International Journal of Information, Technology, and Decision Making. 4 (2005) 477-490.
- T. Helvoigt, D. Adams. A Stochastic Frontier Analysis of Technical Progress, Efficiency Change, and Productivity Growth in the Pacific Northwest Sawmill Industry. ECONorthwest, Eugene, OR (2007).

- J. Henderson. Wildlife Recreation: Rural America's Newest Billion-Dollar Industry. *The Mainstreet Economist*. Center for the Study of Rural America. Federal Reserve Bank of Kansas City, Kansas City, MO. (2004).
- J. Henderson, B. Abraham. Can Rural America Support a Knowledge Economy? *Economic Review*. (2004).
- T. Hoekstra, G. Alward, A. Dyer, J. Hof, D. Jones, L. Joyce, B. Kent, R. Lee, R. Sheffield, R. Williams. *Analytical Tools and Information. Critiques of Land Management Planning*. U.S. Department of Agriculture. Forest Service. FS-455. (1990) 47 pp.
- F. Homes, W. Hecox. Does Wilderness Impoverish Rural Regions? *International Journal of Wilderness*. 10 (2004) 34-39.
- D. Hulse, G. Grant, E. Niemi, A. Branscomb, D. Ulrich, E. Whitelaw. *Muddy Waters: How Floods Clarify Evolving Relationships among Landscape Processes and Resource Management Decision –Making in Municipal Watersheds*, National Council on Environmental Research and Quality Assurance. US EPA GAD #R825822.
- L. Isaac. Fog Drip and Rain Interception in Coastal Forests. US Department of Agricultural, Forest Service, Pacific Northwest Range and Experiment Station 1946, described in R. Harr, *Potential for Augmenting Water Yield through Forest Practices in Western Washington and Western Oregon*, *Water Resources Bulletin* 19 (1983) 383-393.
- D. Judson, S. Reynolds-Scanlon, C. Popoff. *Migrants to Oregon in the 1990's*. *Rural Development Perspectives*. (1999).
- K. Johnson, P. Bettinger, J. Kline, T. Spies, M. Lennette, G. Lettman, B. Garber-Yonts, and T. Larson. *Simulating Forest Structure, Timber Production, and Socioeconomic Effects in a Multi-owner Province*. *Ecological Applications* 17 (2007) 34-47.
- J. Jones, G. Grant. *Comment on Peak Flow Responses to Clear-Cutting and Roads in Small and Large Basins, Western Cascades, Oregon: a Second Opinion* by R. Thomas and W. Megahan. *Water Resources Research* 37 (2001) 175-178.
- J. Jones, G. Grant. *Peak Flow Responses to Clearcutting and Roads in Small and Large Basins, Western Cascades, Oregon*. *Water Resources Research*. 32 (1996) 959-974.
- J. Kerkvliet, A. Plantinga, H. Eichman, G. Hunt. *Are Endangered Species Policies a Boon or Bane for Local Economies: Evidence from the Northwest Forest Plan*. in review. *Land Economics*. (2007a)

- J. Kerkvliet, A. Plantinga, H. Eichman, G. Hunt. Did the Northwest Forest Plan Impact Rural Counties More than Urban Counties? in R. Rosenberger (Comp.) Western Regional Research Publication. W-1133. Benefits and Costs of Resource Policies Affecting Public and Private Land. Twentieth Interim Report. Corvallis, OR (2007b) 317-355.
- P. Kiffney, J. Bull. Factors Controlling Periphyton Accrual during Summer in Headwater Streams of Southwestern British Columbia, Canada. *Journal of Freshwater Ecology* 15 (2000) 339-351.
- G. Latta, D. Adams. An Econometric Analysis of Output Supply and Input Demand in the Canadian Softwood Lumber Industry. *Canadian Journal of Forest Research*. 30 (2000) 1419-1428.
- J. Loomis, D. White, Economic Benefits of Rare and Endangered Species: Summary and Meta-Analysis. *Ecological Economics* 18 (1996) 197-206.
- J. Loomis. Economic Benefits of Pristine Watersheds: The Economic Effects of Timber Harvesting on Recreational and Commercial Fisheries and Municipal Watersheds. American Wilderness Alliance (1988).
- P.A. Lorah, Population Growth, Economic Security, and Cultural Change in Wilderness Counties, in D. Cole, S. McCool (Eds.), *Wilderness Science in a Time of Change*, Proceedings RMRS-P-15-CD, U.S. Department of Agriculture Forest Service, Rocky Mountain Research Station, Ogden, Utah, 2000, pp.30-237.
- P. Lorah and R. Southwick, Environmental Protection, Population Change, and Economic Development in the Rural Western United States, *Population and Environment*, 24 (2003) 255-272.
- D. McGranahan, Natural Amenities Drive Population Change, USDA Economic Research Service. Agricultural Economics Report #781. September 1999. Data obtained from <http://www.ers.usda.gov/Data/NaturalAmenities/>, accessed March 24, 2004.
- L. Mason. Will Low Prices for Large Logs Mean Shorter Rotations on Private Forestlands? Fact Sheet #07. Department of Natural Resources. Washington State University (2002).
- H. Michael, K. Boyle, R. Bouchard, Water Quality Affects Property Prices: A Case Study of Selected Maine Lakes. Maine Agricultural and Forest Experiment Station Report # 398, University of Maine, Orono, Maine, U.S.A. 1996.
- D. Merrifield, R. Haynes. The Adjustment of Product and Factor Markets: An Application to the Pacific Northwest Forest Products Industry. *American Journal of Agricultural Economics*. 66 (1984) 79-87.

- D. Marcouiller, C. Deller. Natural Resource Stocks, Flows, and Regional Economic Change: Seeing the Forest and the Trees. *Journal of Regional Analysis and Policy*. 26 (1996) 95-114.
- L. Moretti. Business Location Decisions: What Global Investors are Looking For and Positioning Destination Status. Deloitte Development Consultants. Presentation at Global Village Forum. (2007)
- P. Morton. Wilderness: The Silent Engine of the West's Economy. The Wilderness Society, Denver, CO. (2004).
- N. Myers, The World's Forests and Their Ecosystem Services, in G. Daily (Ed), *Natures Services: Societal Dependence on Natural Ecosystems*, Island Press, Washington, D.C. 1997 215-236.
- R. Naidoo, T. Ricketts. Mapping the Economic Costs and Benefits of Conservation. *PLoS Biology*, 4 (2006) 2153-2163.
- National Research Council, *Environmental Issues in Pacific Northwest Forest Management*, National Academies Press, Washington, D.C. (2000).
- E. Niemi, W. Whitelaw, M. Gall, A. Fifield. Salmon, Timber, and the Economy. *ECONorthwest*. (1999) 86 pages.
- Office of Technology Assessment. *Forest Service Planning: Accommodating Uses, Producing Outputs, and Sustaining Ecosystems*. OTA-F-505. U.S. Congress. Washington, DC (1992).
- Outdoor Industry Foundation. *The Active Outdoor Recreation Economy: A \$730 Billion Contribution to the U.S. Economy*. available at http://www.outdoorindustry.org/images/researchfiles/RecEconomy_State%20final403.pdf?52 (accessed November 5, 2007).
- Oregon Department of Forestry, *Log Price Information*, available at http://oregon.gov/ODF/STATE_FORESTS/TIMBER_SALES/logpage.shtml. (accessed November 5, 2007)
- J. Perez-Garcia, *Costs Benefit Analysis for New Proposed Forest Practices Rules Implementing the Forests and Fish Report*, Washington Department of Natural Resources (2001).
- D. Pimentel, C. Harvey, P. Resosudarmo, K. Sinclair, D. Kurz, M. McNair, S. Crist, L. Shpritz, L. Fitton, R. Saffouri, R. Blair. Environmental and Economic Costs of Soil Erosion and Conservation Benefits, *Science*, New Series. 267 (1995) 1117-1123.

- D. Pimentel, C. Wilson, C. McCullum, R. Huang, P. Dwen, J. Flack, Q. Tran, T. Saltman, B. Cliff. Economic and Environmental Benefits of Biodiversity. *Bioscience*. 47 (1997) 747-757.
- T. S. Postel and S. Carpenter, Freshwater Ecosystem Services, in G. Daily (Ed), *Natures Services: Societal Dependence on Natural Ecosystems*, Island Press, Washington, D.C. 1997 195-214.
- Power. *Lost Landscapes and Failed Economies: The Search for a Value of Place*. Island Press, Washington, D.C. (1996).
- T. Power, R.Barrett. *Post-Cowboy Economics: Pay and Prosperity in the New American West*. Island Press. Washington, D.C. (2001).
- R. Reader, D. Brown.Recreation, Tourism, and Rural Well-Being. Economic Research Service. U.S. Department of Agriculture. Economic Research Report Number 7. (2005).
- M. Ribaudo. *Water Quality Benefits from the Conservation Reserve Program*. U.S. Department of Agriculture. Economic Research Service. Agriculture Economic Report 606 (1989).
- J. Roback. Wages, Rents, and the Quality of Life. *Journal of Political Economy*. 90 (1982) 1257-1278.
- J. Rubin, G. Helfand, J. Loomis. A Benefit-Cost Analysis of the Northern Spotted Owl. *Journal of Forestry*. (1991) 25-29.
- D. Salvensen, H. Renski. The Importance of Quality of Life in the Location Decisions of New Economy Firms. Center for Urban and Regional Studies. University of North Carolina—Chapel Hill. (2002).
- J. Shumway, S. Otterstrom. Spatial Patterns of Migration and Income Change in the Mountain West: The Dominance of Service-Based, Amenity-Rich Counties. *Professional Geographer*. 53 (2001) 492-501.
- D. Snepenger, J. Johnson, R. Rasker. Travel-Stimulated Entrepreneurial Migration. *Journal of Travel Research*. 34 (1995) 40-44.
- Sonoran Institute. *Prosperity in the 21st Century West—The Role of Protected Public Lands*. (2004).
- T. Spies, K. Johnson, K. Burnett, J. Ohman, B. McComb, G. Reeves, P. Bettinger, J. Kline, and B. Garber-Yonts. Cumulative Ecological and Sociological Effects of Forest Policies in Coastal Oregon. *Ecological Applications*. 17 (2007) 5-17.

S. Tully. How Low Can They Go?: Special Real Estate Report. Fortune. 156 (November 12, 2007) 77-88.

U.S. Fish and Wildlife Service. Federal and State Endangered and Threatened Species Expenditures. Fiscal Year 2004. Washington, D.C.

Washington Department of Natural Resources. Preliminary Economic Analysis: Forest Practices Rule Making Affecting Northern Spotted Owl Conservation. (2000) available at <http://www.dnr.wa.gov/forestpractices/rules/activity/owlecon.pdf> (Accessed November 2, 2007).

M. Wilson, S. Carpenter. Economic Valuation of Freshwater Ecosystem Services in the United States: 1971-1997. Ecological Applications 9 (1999) 772-783.

E. Whitelaw, E. Niemi. Migration, Economic Growth, and the Quality of Life. in Proceedings of the Twenty-third Annual Pacific Northwest Regional Economic Conference. Corvallis, OR (1989) 36-38.

E. Whitelaw and 99 others. A Letter from Economists to President Bush and the Governors of Eleven Western State Regarding the Economic Importance of the West's Natural Environment. (2003).

World Bank. How Much Is an Ecosystem Worth?: Assessing the Economic Value of Conservation. The International Bank for Reconstruction and Development. World Bank. Washington, D.C. (2005) 33 pages.