

# National Forests and Resource Community Economies

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For the US House of Representatives Agriculture Committee, March 13, 2013

Good morning Chairman and members of the Subcommittee. My name is Charles W. McKetta. I am professor emeritus from the University of Idaho and a consulting natural resources economist. I am here today to testify on behalf of the Society of American Foresters (SAF).

The Society of American Foresters (SAF), with more than 12,000 forestry professionals across the country in all segments of the profession, believes in sound management and stewardship of the nation's public and private forests. The Society of American Foresters (SAF) and the USDA Forest Service (USFS) share goals. We'd all like to see federal forests restored to health and operating efficiently to serve national and local interests.

## **I am here to address a narrow set of questions:**

1. "What are the economic linkages between natural resource-oriented communities and nearby national forests?"
2. "How can National Forests recognize those linkages to the mutual advantages of the agency and resource economies?"

The first is a technical question that I answer for specific projects on a regular basis. The second is inferential. From the numerous analyses that we have done, I've generated a set of personal insights that might be helpful to your committee.

**What do I bring to the discussion?** The Society of American Foresters knows that I have worked on market and community effects of federal forest policy changes since the 1970s. I did this while forest research station economist at University of Idaho and since 2002 as a natural resource economics consultant in cooperation with two regional economists, Dr. M. Henry Robison,<sup>1</sup> and Dr. Daniel Green.<sup>2</sup> They invented the spatially disaggregated input-output modeling process that we use to estimate policy effects at multiple economic resolutions. We have generally found, with few exceptions, that since the Endangered Species Act (ESA),<sup>3</sup> National Forest policy change effects on western natural resource community economies have been negative. However, one project in 2007, and two of our 2012 impact analyses, all set in Oregon, demonstrate that future interactions could be more positive in three ways.

1. **Unilateral resource supply augmentation:** The Western Oregon Bureau of Land Management (BLM) districts are charged with a community economic development

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<sup>1</sup> Dr. M. Henry Robison is founder of Economic Modeling Specialists Inc. (EMSI). Moscow, Idaho.

<sup>2</sup> Dr. Daniel Green is principal of Economic Modeling Systems (EMS). Moscow, Idaho.

<sup>3</sup> Endangered Species Act of 1973 (7 U.S.C. §136, 16 U.S.C. §1531).

objective. Their W. Oregon plan Draft Environmental Impact Statement (DEIS)<sup>4</sup> would have increased resource flows from BLM trust lands to improve 75% fund returns to 18 O&C<sup>5</sup> trust counties. Our work found that the pre-NW Forest Plan<sup>6</sup> forest industry had contracted significantly, but that total job and income and county revenue gains could still accrue in new patterns to many of the O&C counties.

2. **Integrated resource supply augmentation:** We quantified Oregon's forest sector economic linkages last year.<sup>7</sup> We found that national economic recovery is stimulating Oregon's forest-based industries, fueling recovery of the state's economy. This increases demands for federal timber (and for other forest ecosystem services). We were able to show where bottlenecks to recovery exist (in existing mill capacities, lack of skilled labor, and public timber supply) and how relaxing such constraints could increase secondary economic benefits.
3. **Individual restoration project selection to enhance economic development:** Our analysis of E. Oregon National Forest restoration projects for Oregon Department of Energy<sup>8</sup> quantified how three specific types of National Forest restoration projects differentially stimulated local jobs, incomes, and tax flows. We also showed differential gains per unit of public expenditure and a lack of private manufacturing capacity for using the increased availability of undifferentiated federal forest biomass.

**Start by replacing dated resource community constructs:** Much as concepts of forest health and ecosystem management displaced commodity production in federal forestry, rural community economic health has replaced the old concept of forest-dependent community stability. Almost by definition, rural resource communities are small, specialized, and resource dependent. The model is that a few service sectors import commodities to service one or two dominant export sectors. These are open economies so multiplier effects may occur elsewhere up regional trade hierarchies. Community specialization makes their economic vitality subject to any external economic pressures that affect their dominant sectors. This happens to agriculture, grazing, mining, timber, or recreation-specialized communities. They are also sensitive to local pressures that affect the resources that they need in production.

There is a useful analytical corollary that is often ignored in forest policy formulation. It is popular to categorize rural resource communities as being dependent on National Forests for the

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<sup>4</sup> Forest Econ Inc. 2007. Western Oregon Plan Revision (WOPR). Background analyses for Chapter 4: The affected environment. Subcontract to Mason, Bruce & Girard for Bureau of Land Management.

<sup>5</sup> O&C Lands Act of 1937 (PL 75-405) Oregon & California Railroad revested lands to be managed by BLM with returns to O&C counties.

<sup>6</sup> NWFP 1994 Northwest Forest Plan Overview. Regional Ecosystem Office. [www.reo.gov](http://www.reo.gov). The NWFP reduced National Forest timber harvests 90% and to a lesser extent reduced other public harvests.

<sup>7</sup> Forest Econ Inc. June 2012. The 2012 Oregon Forest Report: An economic assessment of Oregon's forest and wood products sector. Subcontract to Mason, Bruce & Girard for Oregon Forest Resource Institute.

<sup>8</sup> Forest Econ Inc. November 2012. National Forest Health Restoration: An economic assessment of forest restoration on Oregon's eastside National Forests. Subcontract to Mason, Bruce & Girard for Oregon Department of Energy.

resource base they utilize. Conversely, to make forest restoration work, National Forests are also dependent on the labor, services, capital and infrastructure that can be found in these communities. This is what ecologists call symbiosis. In an economic symbiosis, mutual well-being is equally important to both organisms. National Forest policies that ignore resource community economic health could be self-defeating. Policies focused on complementary moves are more likely to achieve mutual goals.

**Scale and resolution matter:** As in ecology, economic effects vary by the resolution scale. An organization's share of an economy dictates the extent of its influence. In perfect competition any one actor is too small to affect outcomes. At a national economy scale, the National Forest system is small. Failures of intentional forest community stabilization efforts as far back as 1944<sup>9</sup> demonstrated that intentional National Forest actions are insufficient to buffer them from boom-bust national economic cycles.

At higher geographic resolutions, e.g., multi-county regions, coordinated National Forests' economic powers become influential. When the USFS acts, it changes markets for resources, labor, and community services. By affecting related sectors such as recreation, timber or water, trade linkages to other regional sectors mean whole regional economies can be affected. Those economic ripples are predictable. Whether such influences would be positive or negative depends on the nature of the policy change. Regional economic responses to the NW Forest Plan demonstrated that single agency policy changes can radically change the vitality of linked sectors and undermine the economic health of the communities that house them. Negative effects have declined. Now we are finding that positive responses to changed forest policy are becoming plausible.

**National Forests as local monopolists:** At the scale of individual community economies, a National Forest is usually economically dominant with many market powers. There is also a parallel social dominance caused by higher salaries, better education, and job security that is a peripheral complicating factor. We focus on just their exercise of economic power and typically find it to be both "unintentional" and "inept." As such, National Forests' economic influences on open rural economies can be erratic and counter-productive.

I say "unintentional" because the power to reengineer nearby economies has rarely been a conscious objective of National Forest decision-makers. Impacts analyses are made as required for NEPA<sup>10</sup> changes, but typically these have small influence on selections of preferred alternatives. The 1993 Interior Columbia Basin Ecosystem Management Project (ICBEMP)<sup>11</sup> was a singular coordinated exception that affected 24% of the National Forest system land base. ICBEMP analysts rationalized that National Forest ecosystem management changes could replace lost private timber jobs and incomes with preferred amenity recreation and retirement-based equivalents. The Association of Oregon Counties asked us for more realistic estimates,

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<sup>9</sup> Sustained Yield Unit Act of March 29, 1944 (58 Stat. 132; 16 U. S. C. 583-5831).

<sup>10</sup> National Environmental Policy Act of 1969 (Pub. L. 91-190, 42 U.S.C. 4321-4347).

<sup>11</sup> USDA Forest Service. 1993. Interior Columbia Basin Ecosystem Management Project. [www.icbemp.gov](http://www.icbemp.gov).

alarmed because the Wallowa-Whitman N.F. was quickly reducing timber harvests. Our projections of NE Oregon mill closures<sup>12</sup> accurately predicted the order and magnitude of job and income losses. We found few new noncommodity opportunities. Two decades later, few replacement jobs materialized, the collateral damage to commodity economies was compensated only to the extent of previous 25% fund payments,<sup>13</sup> while both local economic vitality and forest ecosystem health declined.

I say “inept” for two other reasons:

1. USFS non pecuniary decision criteria, such as achieving ecosystem function, do not maximize its own profitability, but redistribute potential gains (and losses) to others. Other actors game against generally predictable USFS market distortions. I used my own 1994 predictions of tripled timber prices in NC Idaho<sup>14</sup> to profit from buying my own private forest. My neighbor paid for a new tracked excavator when a widespread National Forest road removal project sucked up all the private earth-moving equipment within a 300-mile radius. For two years few private forest roads were built in the vicinity.
2. Often unintended (and potentially self-defeating) feedback loops with nearby private labor and capital resources can impede the agency’s own internal objectives. Our two studies for the SW Idaho Forest Ecosystem Management DEIS<sup>15</sup> showed how three coordinated National Forest<sup>16</sup> timber program changes would close 7 of 8 mills without creating compensating nontimber jobs. Six years later, when the same National Forests wanted to increase ecosystem restoration harvests, private wood collection and processing infrastructure had disappeared. We calculated the present value of risky, dispersed, and low-quality federal raw material flows and predicted little new private investment in wood processing capacity. The one attempt to build a new mill with federal stimulus funds failed.<sup>17</sup> The point is that, at local scales, National Forest decisions could have incorporated the predictable reaction patterns of associated private decisions. Such a process might have stabilized the balance of public projects and supporting private infrastructure to mutually improve long-run outcomes.

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<sup>12</sup> McKetta and Associates. 1993. NE Oregon responses to Wallowa-Whitman timber harvest reductions. Chapter 3: Distribution of economic effects. For county commissioners of NE Oregon.

<sup>13</sup> Secure Rural Schools and Community Self-Determination Act of 2000 (16 USC 500, PL 106-393).

<sup>14</sup> McKetta and Associates. 1996. Market effects of National Forest timber harvest reductions and projected NC Idaho mill closures and market effects. Report to the Idaho Governor’s office.

<sup>15</sup> Forest Econ Inc. August 2000. Predicted wood products responses to Forest Service planning alternatives in SW and west-central Idaho. Subcontract to Economic Modeling Specialists Inc. for the SW Idaho Forest Ecosystem DEIS.

<sup>16</sup> Boise, Payette, and Sawtooth National Forests.

<sup>17</sup> Emerald Forest Products sawmill, Emmett, Idaho.

Private monopolies are illegal<sup>18</sup> because of their power to extort wealth and erode economic efficiency. Government monopolies are used in special cases, but are regulated to harness and direct that power to achieve social objectives. In the unusual case of the National Forests, that economic power is generally overlooked. The Forest Service used to characterize its monopoly power as of the “benevolent type,”<sup>19</sup> but have since avoided the terminology. However, “With great power comes great responsibility.”<sup>20</sup> Forest restoration projects could be designed to complement local economic development, but the process would require explicitly integrating social preference and value criteria into National Forest planning decisions. As analysts, we have to measure the extent that National Forest actions affect economic linkages to make accurate policy response estimates. We try to avoid the moralities of how that power is ultimately exercised.

**Focus on the economic linkages:** Policy impact analyses are simpler for competitive functional economies. For National Forest-dominated open economies, we have to adapt our effects estimation process to reflect the dominance. We typically look at six factors that determine the potential influence of any particular economically dominant National Forest.

1. **The direction of the federal policy shift and the signs of its various linkages:** This can be complicated and counterintuitive. For example federal log export restrictions,<sup>21,22</sup> had positive effects for domestic log users, but negative effects of similar magnitudes on shippers and private timber growers.
2. **The economic dominance of the agency and the size of its changes:** This varies by the type of change and the public market share. We’ve found small federal harvest changes that caused a large price and local job effects, and large recreation changes that dispersed small job effects over a large spatial matrix of access routes.
3. **The availability of local private infrastructure, its technical flexibility, and its financial resilience:** Local private sectors have to accommodate federal policy changes. The only part of a typical random length sawmill that effectively uses undifferentiated ecosystem management biomass is boiler. Woody biomass hauling requires both transportation capital and a viable end user. Even logging and restoration equipment may be specialized. Large fire expenditures are good examples of insufficient local services. Fire has become big business in the West, but little of that spending is retained locally either for control or rehabilitation spending. We examined one fire salvage project<sup>23</sup> where local contractors had long gone bankrupt,

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<sup>18</sup> Sherman Anti-trust Act (July 2, 1890, ch. 647, 26 Stat. 209, 15 U.S.C. §§ 1–7).

<sup>19</sup> Lyle Watts, 1947. Statement of the US Forest Service Chief on the 1944 Sustained Yield Unit Act of 1944.

<sup>20</sup> Voltaire, Jean, 1832. "Œuvres de Voltaire, Volume 48". Lefèvre, (also Uncle Ben to Spiderman 2002).

<sup>21</sup> January 1, 1969 amendment to the Foreign Assistance Act of 1968 (82 Stat. 966).

<sup>22</sup> Dr. Charles McKetta. 1996. Economics of log export restrictions. U of Idaho white paper for the Idaho Governor’s Office. Forest Econ Inc. Subcontractor to Economic Modeling Specialists Inc.

<sup>23</sup> Forest Econ Inc. 2006. School fire proposed salvage sales economic analysis. For USDA Forest Service Umatilla National Forest.

so all the contractors and their equipment came from 300 miles away at higher cost. As transients they left an extremely limited local economic footprint.

4. **The sensitivity of the community economic structure in four dimensions:**
  - a. Dispersed rural communities are low on regional transactional hierarchies, i.e., they are naturally specialized as resource-linked sectors (e.g., resorts, mill towns, transportation services). They have to react to changes in both directions- national economic and local forest policy changes. This pushes the limits of resilience.
  - b. Decisions in nearby National Forests can dominate large sectors of small undiversified adjacent economies. Actions of the Forest Service can effectively control private decisions that are forest linked.
  - c. Local effects leakages can be high and distributed spatially along trade hierarchies. By looking at linkages across the functional regional economy of N. Idaho, we found one case of direct job losses from a hinterland mill closure that were smaller than secondary job losses in the regional trade center 60 miles away. However, the smaller absolute losses were a huge percentage of a small population, compared to a larger absolute job loss in a more diverse economy 15 times larger.
  - d. Socioeconomic demographics are important. We often find working middle class compression, while entitlements households and retirees have expanded. Labor and equipment trade linkages often jump adjacent communities.
5. **The nature of policy change:** Rural subfunctional economies can adapt, but success depends on predictability, being within the limits of societal resilience, certainty of the response environment, and sufficient time to mitigate adjustment costs. Adjustment is a concern whether the effects are negative or positive. A rule of thumb is that a standard deviation change in a short period is likely to generate socioeconomic crisis. Spreading even large certain changes over longer time spans stimulates economic evolution within a set of survival parameters.
6. **Linkages mutate:** One of our toughest messages to local community leaders is that National Forest policy reversals do not return economies to historical patterns. The corollary is that intentional social reengineering can cause new and sometimes unexpected economic responses.

**Ecosystem management and resource community health are complementary:** A prime purpose of ecosystem management is to improve forest health and ecosystem function. Why? Because healthy forests produce lots more human benefits such as carbon sequestration, water quality, wildlife habitat, wood products, reduced risks of fire and disease, recreation opportunities, and aesthetics. Notice that these objectives can be simultaneously produced. With the exception of wilderness and some ESA species habitat protection, there are very few mutually exclusive benefits. In private forests, such complementarity means increased

profitability, although public forests have non pecuniary objectives, complementarity increases net social benefits.

Economic linkages to surrounding communities are also typically complementary. Except for a few exclusive destination resorts, we have found that rural timber sectors and recreation sectors typically complement each other, enabling communities to have some diversity and larger service sectors. This construct recognizes a more complex potential for resource-based communities.

**National Forests are aware of these linkages:** Both NEPA and NFMA<sup>24</sup> require economic impact analyses. To that end, the Forest Service underwrote the IMPLAN<sup>25</sup> model development, and their specialists use this well-regarded tool. Most forest plans have plausible economic effects estimates for every alternative. We have often been hired by affected parties and counties to check or augment these estimates. Up to now a crucial disclaimer to our clients has been that that job and income effects arguments rarely sway National Forest choices between alternatives. We are recently seeing a change in that relevance. Our privately funded N. Idaho caribou policy effects study<sup>26</sup> was used by US Fish and Wildlife Service to justify reducing designated habitat acreage on the Panhandle National Forest.

**A take-away message:** The National Forest System already has the technology and the professional capability to combine both forest restoration needs and surrounding economy improvements into project and forest planning decision processes. Decision criteria could include facets of economic development as complementary (or win-win) joint outcomes do exist. However, for this to succeed, and to expand the idea nationally, cooperative private activity and investment has to be made politically acceptable, profitable, and less risky. In the end, each National Forest would need the political will, authority, and budget to recognize local public expectations and allocate public resources as credible long-run product flow guarantees.

**National Forests need an effective public interface to integrate their operations with local communities:** In our experience, National Forest public information offices and public meetings function more as barriers to access than providers of useful data and insight. Recent National Forest experiments with collaborative working groups may mitigate this problem. For example, the Four Forest Restoration Initiative (4FRI)<sup>27</sup> organizes many stakeholders around an explicit goal of restoring forest ecosystems. Increased 4FRI wood supplies are also expected to attract private investment and 300 new processing jobs. In our Oregon studies, we had positive experiences with similar collaborative working groups. Their overhead costs appear high, but we have not yet explicitly studied their cost-effectiveness.

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<sup>24</sup> National Forest Management Act of 1976 (P.L. 94-588).

<sup>25</sup> IMPLAN is a widely used economic impact estimation input-output model currently marketed by Minnesota IMPLAN Group. <http://implan.com>.

<sup>26</sup> Forest Econ Inc. June 2012. Economic effects of woodland caribou habitat designation in N. Idaho. Report to the Idaho State Snowmobile Assn.

<sup>27</sup> Four Forest Restoration Initiative includes coordinated ecosystem restoration and industrial development efforts involving the Apache-Sitgreaves, Coconino, Kaibab, and Tonto National Forests. [www.fs.usda.gov/4fri](http://www.fs.usda.gov/4fri).

I am available for questions or clarifications of these points. On behalf of the Society of American Foresters, I thank you for this opportunity.



**Committee on Agriculture  
U.S. House of Representatives  
Required Witness Disclosure Form**

**House Rules\* require nongovernmental witnesses to disclose the amount and source of Federal grants received since October 1, 2008.**

**Name: Dr. Charles W McKetta, PhD, CF**

**Organization you represent (if any): Society of American Foresters**

- 1. Please list any federal grants or contracts (including subgrants and subcontracts) you have received since October 1, 2008, as well as the source and the amount of each grant or contract. House Rules do NOT require disclosure of federal payments to individuals, such as Social Security or Medicare benefits, farm program payments, or assistance to agricultural producers:**

**Source: 2008 Bureau of Land Management W. Oregon Plan Revision DEIS as Subcontract to Mason, Bruce and Girard Amount: \$12,000**

**Source: 2009-2010 U.S. Forest Service, SW Idaho Forest Plan Update as subcontract to Economic Modeling Specialists Inc. Amount: \$12,900**

- 2. If you are appearing on behalf of an organization, please list any federal grants or contracts (including subgrants and subcontracts) the organization has received since October 1, 2008, as well as the source and the amount of each grant or contract:**

**Source: USDA Forest Service Amount: \$18,000.00**

**Source: USDA Forest Service Amount: \$45,922.75**

**Source: USDA Forest Service Amount: \$63,500.00**

**Source: USDA Forest Service Amount: \$33,000.00**

Source: USDA Forest Service Research Amount: \$48,943.95

Source: USDA Forest Service Research Amount: \$18,000.00

Source: Peace Corps Amount: \$3,497.55

Source: Bureau of Land Management Amount: \$12,000.00

Signature:

A handwritten signature in black ink, appearing to read "Charles W. McKetta", followed by the date "3/6/2013". The signature and date are written over a horizontal line.

\* Rule XI, clause 2(g)(4) of the U.S. House of Representatives provides: *Each committee shall, to the greatest extent practicable, require witnesses who appear before it to submit in advance written statements of proposed testimony and to limit their initial presentations to the committee to brief summaries thereof. In the case of a witness appearing in a nongovernmental capacity, a written statement of proposed testimony shall include a curriculum vitae and a disclosure of the amount and source (by agency and program) of each Federal grant (or subgrant thereof) or contract (or subcontract thereof) received during the current fiscal year or either of the two previous fiscal years by the witness or by any entity represented by the witness.* **PLEASE ATTACH DISCLOSURE FORM TO EACH COPY OF TESTIMONY**

**Committee on Agriculture  
U.S. House of Representatives  
Information Required From Nongovernmental Witnesses**

**House rules require nongovernmental witnesses to provide their resume or biographical sketch prior to testifying. If you do not have a resume or biographical sketch available, please complete this form.**

**1. Name:** Charles W. McKetta PhD, CF

**2. Organization you represent:** Society of American Foresters

**3. Please list any occupational, employment, or work-related experience you have which add to your qualification to provide testimony before the Committee:**

University of Idaho professor emeritus in Forest Economics, 1977-2002; U of Idaho Forest, Wildlife and Range Experiment Station Economist 1977-2002;

Forest manager of private non-industrial forest in Idaho

**4. Please list any special training, education, or professional experience you have which add to your qualifications to provide testimony before the Committee:**

Consulting natural resources economist Forest Econ Inc. specializing in economic effects of forest policy 2002-2013; numerous assignments in forestry and international development with: USAID, UN/FAO, World Bank, other regional development banks

**5. If you are appearing on behalf of an organization, please list the capacity in which you are representing that organization, including any offices or elected positions you hold:**

Experienced professional witness; SAF fellow

**PLEASE ATTACH THIS FORM OR YOUR BIOGRAPHY TO EACH COPY OF TESTIMONY.**

