

The social and livelihood benefits of USDA Forest Service agreements with community-based organizations

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About the Dry Forest Investment Zone

The Dry Forest Investment Zone (DFZ) is a five-year project to address common natural resource-based economic development challenges through increased networking and capacity building at a regional scale. Sustainable Northwest leads this project in partnership with Wallowa Resources in northeastern Oregon, the Watershed Research and Training Center in northern California, and the Ecosystem Workforce Program at the University of Oregon. The central components of the DFZ strategy are: 1) To build strong local nonprofit organizations and collaborative processes to achieve forest and economic resilience, 2) Create multiple value streams from land management and incentives for forest restoration and stewardship, 3) Develop integrated biomass utilization and renewable energy; and 4) Create the policy conditions to support sustainable forest stewardship on public and private lands.

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The federal government is the largest landowner in many western communities. It contributes to local socioeconomic vitality by providing opportunities for businesses and partners to perform land management activities and process natural resources. How federal agencies produce these benefits depends on the type of mechanism (e.g., timber sales, service contracts, or stewardship contracts and agreements) used to sell goods or procure services. To perform land management work on the ground, the U.S. Department of Agriculture's Forest Service or U.S. Department of the Interior's Bureau of Land Management typically goes "to the market" by soliciting service contracts or offering timber sales in the private sector. The agency also chooses how to structure the opportunity—for example, setting an amount of timber to be sold or acres to be treated—and selects a business to purchase goods or perform work. In turn, how this business conducts work further determines community benefits such as the number of jobs created or retained and the wages paid.

A long history of research and rural economic development practice assumes linkages between federal timber sales and community well-being.¹ The decline in timber harvests since the 1980s is well documented. More recently, research suggests that agency service contract spending has also declined

substantially. Moreover, local contractors have received smaller proportions of work over time, which limits the ability of rural communities to benefit from adjacent federal lands.² Less is known about the benefits of agreements, which allow a federal agency to partner with a nonprofit organization or government agency to share costs and produce mutually beneficial outcomes for the public good. Increasingly, the Forest Service uses agreements with nonprofit, community-based organizations (CBOs) in the west to accomplish forest and watershed restoration projects, including hazardous-fuel reduction. These CBOs have reinforcing goals of forest stewardship and economic development, so they deliberately focus on the creation of local benefits and other public goods.

In this study, we examine how agreements between the Forest Service and CBOs under the American Recovery and Reinvestment Act (ARRA) in 2009–10³ created community benefits. We define benefits in this study as 1) social, which include the performance of restoration work that addresses collaboratively identified priorities and ecological concerns, and 2) livelihood, which include creation or maintenance of high-quality jobs⁴ and opportunities for local business development.⁵ We discuss how partnerships with CBOs and different kinds of agreement structures can make these benefits possible.

Approach

We conducted case studies of Forest Service ARRA agreements with three CBOs: Wallowa Resources in northeastern Oregon; the Lomakatsi Restoration Project in southwestern Oregon; and the Watershed Research and Training Center in northern California. In each study location, a CBO has been actively working on forest management and community development with the national forest in their vicinity for more than a decade. We obtained recipient-reported data on value, costs, duration, and outcomes of case study agreements from Recovery.gov. We also conducted thirteen interviews with Forest Service and CBO staff, county and community leaders, and local businesses.⁶ Interviews focused on the decisions and strategies that CBOs and partners used to try to create local benefit through agreements, and the challenges and opportunities of creating local benefit in partnership with the Forest Service.

Reservoir Biomass Fuels Reduction Project, Wallowa-Whitman National Forest

Much of the Wallowa-Whitman National Forest (WWNF) in northeastern Oregon is at high risk for severe wildfire. This isolated region also has high rates of poverty and unemployment. Wallowa Resources formed in 1996 to help stakeholders in Wallowa County find agreement on restoring their public and private lands. Collaborative processes that Wallowa Resources has led include the Wallowa County Natural Resource Advisory Committee, Wallowa County Community Wildfire Protection Plan development, and Upper Joseph Creek and Lower Joseph Creek watershed assessment processes. Wallowa Resources and other county leaders have also been developing an integrated small-diameter biomass utilization campus (a cluster of several small wood-production lines coupled with a merchandizing system to ensure the highest and best use-value from forest biomass) to help produce greater value from material harvested from restoration treatments.

The WWNF and Wallowa Resources partnered on

the 621-acre Reservoir Biomass project to determine if mechanical thinning with biomass utilization could be cost-effective in achieving desired stand improvement and producing multiple benefits in comparison to their standard business practice of hand thinning, piling, and burning. The purpose of this project was to demonstrate how to structure hazardous-fuels work to reduce costs to the government, produce local jobs, and support the growing biomass utilization industry in Wallowa County.

The WWNF entered into a cooperative research and development agreement with Wallowa Resources to plan, conduct, and monitor fuels reduction on these acres. This type of agreement is used when the Forest Service conducts research with a nonfederal partner for mutual benefit. It supports learning and innovation by allowing trial initiatives. Under this agreement, Wallowa Resources worked in two phases, beginning with a pilot phase to first understand the operating costs and equipment capacities of local contractors. Wallowa Resources contracted with local and regional businesses to perform this work, and purchased the restoration byproducts from the Forest Service to sell to a local biomass utilization company. By having Wallowa Resources serve as the primary legal and fiscal entity in the agreement with the federal government, these approaches helped protect the participating small businesses from the financial risks of conducting trial work.

Social benefits

The partnership between Wallowa Resources and the Forest Service helped ensure that the Reservoir Biomass project occurred in a place that several local collaborative efforts considered a high priority. It addressed issues that stakeholders had identified as important in the Wallowa County Community Wildfire Protection Plan, including stand improvement, reduced risk of tree mortality from prescribed burns and wildfires, resilience of stands to mountain pine beetle, and utilization of the resulting byproduct to support new business development. This increased local support of and interest in using this innovative biomass utilization and agency-CBO partnership approach for future management.

Livelihood benefits

The pilot nature of this project allowed Wallowa Resources to structure mechanical thinning approaches to match local business capacity. There is little local business capacity for hand thinning and burning, which are typical approaches to hazardous-fuels reduction. Wallowa Resources contracted with two local family-owned businesses, which put up to seven people at a time to work. Employment opportunities are significant to Wallowa County, which has struggled to retain its forestry businesses and workforce since the 1990s. An anticipated longer-term impact of this project is a steadier stream of restoration contracts and jobs. This project's emphasis on cost-effectiveness spurred discussion about operating costs, supply, and sorting issues at Wallowa County's integrated biomass campus. Project partners developed stronger understandings of the costs of mechanical thinning, sorting, and landing, and federal regulatory obstacles. They also learned in detail the quality and types of supply that local biomass businesses and thermal end-users require. This provided momentum to the ongoing efforts to develop an integrated biomass campus to support local restoration. This project also created the value proposition for similar treatments to accomplish fuels reduction, which may provide more future work opportunities.

Challenges

Federal regulations on road quality at time of access and costs of road use ultimately limited access to several planned units, reducing the treatment area and amount of biomass produced. In addition, when a portion of the harvested material was delivered to the biomass boiler at the Enterprise High School, there were challenges to using it as fuel because it was not the appropriate type and grade, largely due to processing shortcomings. However, the project was a learning experience because it allowed partners to better understand the needs of local biomass end users for future utilization.

Hope Mountain Stewardship Agreement, Rogue River–Siskiyou National Forest

As harvest from the Rogue River–Siskiyou National Forest began to decline in the 1980s, Josephine and Jackson counties experienced social conflict and severe economic dislocation. Today, this region typically ranks high in poverty, unemployment, and reliance on food stamp and free and reduced lunch programs. However, these two counties are rich in diverse forest types, including dense, overstocked second-growth plantations in need of restoration and capable of generating timber revenue. The Lomakatsi Restoration Project, which formed in Ashland in 1995, has pursued development of a workforce that could perform these restoration activities while producing income and building essential human capacity in Josephine and Jackson counties.

In 2008, the Wild Rivers Ranger District of the Rogue River–Siskiyou National Forest, Lomakatsi, and the Siskiyou Project, a local conservation nonprofit organization, developed the ten-year, 10,000-acre Master Stewardship Challenge Cost-Share Agreement (MSA) to jointly plan several restoration projects. The MSA was possible because leaders from the Siskiyou Project and other entities had worked for years to build agreement and trust between various stakeholders about difficult forest management issues in the Illinois Valley. In 2009, ARRA funds provided \$1.4 million for implementation of the MSA's first planned project, the Hope Mountain Stewardship Project, through a supplemental project agreement to the MSA. The Hope Mountain project consisted of thinning, fuels reduction, and stream restoration to address sediment transport and deposition, and improve structural diversity in approximately 1,000 acres of even-aged plantations.

Because they used stewardship authorities, the Forest Service and partners were able to outline best-value criteria in the selection of contractors for the Hope Mountain project, including meeting local community needs and priorities, using local workforce, and performing duties in an environmentally sound manner. The agreement also specified that these nonprice criteria were more important than cost. Further, although challenge cost-share agreements typically require a 50 percent match, at the time national-level guidance allowed waiving match for ARRA projects. This made it far easier for the Siskiyou Project and Lomakatsi to enter into agreements with the agency.

Social benefits

By specifying community priorities as a best-value criterion in the supplemental project agreement, the project partners were able to conduct work in areas where there was social agreement. Some of the pro-

posed activities in the project area had previously been controversial, as local residents questioned the Forest Service's plan to treat older stands. However, leaders from the Siskiyou Project worked with these residents to increase understanding of restoration needs in second-growth plantations. Leaders from the Siskiyou Project also asked the Forest Service to use stewardship authorities to structure the project to best match community desires and concerns; and asked independent scientists to help modify treatment prescriptions to increase the quality of the work in response to community concerns. As a result, this project was not appealed or litigated.

Livelihood benefits

This project supported forty-five restoration jobs in Josephine County for Lomakatsi and other contractors. It helped retain twenty-five jobs and create fourteen new jobs. Lomakatsi deliberately subcontracted a portion of its work to a local family busi-



ness that would otherwise not have had access to a work opportunity of this size on public lands. The best-value criterion for the local workforce in the agreement also gave local workers a chance to train by working on thinning, piling, prescribed burning, and other restoration activities. These kinds of employment and training experiences are rare in the Illinois Valley and increase the capacity of local workers to successfully bid on and implement future projects. ARRA funds also allowed the planned project area to grow in magnitude, increasing acres treated and material harvested. In addition, because project partners emphasized social agreement and built on years of collaborative work, they were able to treat older plantations, which produced some small-diameter timber for two regional sawmills. The 220-acre Page Mountain Sno-Park unit also generated small-diameter material for biomass cogeneration at these mills. This indirectly supported additional employment in transport and processing at the mills.

Challenges

The rush to find “shovel-ready” projects for ARRA meant that final decision-making about implementation in some of the Hope Mountain units was less collaborative than some local partners would have preferred. The Forest Service had to provide ARRA resources to projects that were already through the National Environmental Policy Act (NEPA) process and “on-the-shelf,” and the Siskiyou Project had to work rapidly with landowners in the public-private interface, Lomakatsi, and other contractors to ensure that these plans fit local desires and zones of agreement.

South Fork Fuels Reduction and Wildfire Rehabilitation, Shasta-Trinity National Forest

The Shasta-Trinity National Forest covers more than 85 percent of Trinity County, which has a complex ecological and socioeconomic landscape. There is strong local interest in restoring fire-prone forests and addressing high levels of poverty and unemployment. The Watershed Research and Training Center, a local nonprofit that formed in 1993, has led efforts to retrain displaced forest and mill workers, develop biomass utilization businesses, and

affect public lands policy. The center and others work to address longstanding unemployment and poverty, which increased during the recent recession when the county’s unemployment has reached more than 20 percent and unemployment in Hayfork has approached 30 percent. Enormous growth in high-grade marijuana cultivation, much of it on the national forest, has also transformed Trinity County’s public landbase and sociocultural fabric.

In 2008, the Shasta-Trinity National Forest experienced a severe fire season with more than a dozen large wildfires burning over 200,000 combined acres and exceeding \$1 million in suppression expenditures apiece. These fires left hazard trees and debris on hundreds of acres of forest, including recreation sites, trails, and roads. When they received ARRA resources, the Shasta-Trinity prioritized fuels reduction and postfire rehabilitation work through several projects on the South Fork Management Unit through an agreement with the Watershed Research and Training Center. Using their in-house adult and youth crews, the center felled hazardous trees, brushed fire-affected trails, and hand-thinned to create a shaded fuel break on the public-private land interface in the Hayfork Valley.

The Forest Service used a participating agreement to partner with the center. These agreements can create community benefits because they can fund “cooperative manpower, job training and development” if the cooperator has an established job training program. The primary purpose of this kind of agreement is to “provide a work environment in order to accomplish the goals of others’ existing manpower and job training programs.”⁷ This opportunity fit well with the center’s local employment and capacity-building goals.

Social benefits

The Watershed Research and Training Center and local contractors had been chipping away at strategic fuel-break development on the public-private land interface in the Hayfork Valley for several years using limited Secure Rural Schools Act Title II Resource Advisory Committee funding. The community’s wildfire protection plan had identified this interface as a top priority area for treatment, and it represented a concern for many local stake-

holders. This participating agreement enabled the center to help reduce wildfire risk across a larger, more continuous landscape, addressing this community need.

Livelihood benefits

Public lands compose more than 80 percent of Trinity County's land base, yet local contractors have had limited opportunities to capture work on the Shasta-Trinity. This participating agreement prioritized giving local adult and youth opportunities to work on their local national forest and build restoration skills. These projects also enabled the Watershed center's youth crew to gain enough experience to be certified as a Youth Conservation Corps (YCC) crew. This will increase the crew's qualifications and competitiveness to bid on future projects, and will provide future benefits for the youth who gained official YCC work experience. The South Fork projects also helped enhance recreation and tourism, which have become increasingly important sectors of Trinity County's economy, by mitigating wildfire damage to significant recreation areas on the Shasta-Trinity. Youth crews cleared debris and reestablished safe conditions on the popular South Fork River and Bear Creek trails. This provided an opportunity to renew important recreation values for local and visitor enjoyment.

Challenges

There were planning challenges associated with the South Fork projects. First, there was a limited selection of "shovel-ready" projects that had been through the NEPA process. To create enough work to utilize the available ARRA resources, the Watershed center had to rapidly develop plans and budgets for several different areas in less than three weeks, preempting site visits and specific cost estimates. This required extensive staff time at both the center and the Forest Service, and increased administrative complexity. Further, continued social disagreement over forest management on the Shasta-Trinity led the forest to remove one of its planned projects from implementation. Finally, ARRA opportunities depleted the available "shelf stock" of NEPA-ready projects on the Shasta-Trinity,

and the forest currently faces limited opportunities for future work until more environmental planning can be completed.

Opportunities for creating social and livelihood benefits through agreements

Collaboration, local trust, and agreement

When the Forest Service enters into an agreement with a community-based organization (CBO), the CBO can help design and/or select forest management projects and implementation strategies that meet community needs and priorities. This may enhance community–Forest Service relationships, and projects may be less likely to be litigated or appealed. There may also be more flexibility in treatment options and possibility of biomass or other material removal, contributing to livelihood benefits. In addition, CBOs may be able to leverage further investments of outside funding or technical resources. In each of these case studies, CBOs had played key roles in helping stakeholders identify their management priorities and reach agreement by organizing past processes such as community wildfire protection planning or collaborative groups developing zones of agreement around watershed and landscape-scale forest stewardship. When the opportunity for ARRA funds arose, case study CBOs were poised to help the Forest Service quickly select projects that met community needs and priorities, and ensured that stakeholders remained supportive. For example, the Siskiyou Project consulted with scientists during the development of prescriptions for Hope Mountain to affirm and adjust planned work within the local zone of agreement. Stewardship agreements can directly support projects that are within the range of agreement and meet community priorities by specifying this in best-value criteria.

Innovation

Agreements that allow for experimentation and innovation may yield insights into how to do more restoration work that meets community priorities

in the long term. The Reservoir Biomass cooperative research and development agreement enabled Wallowa Resources and the Forest Service to pursue a question that was important to stakeholders: Is mechanical treatment with biomass utilization more cost-effective than traditional hand thinning and pile burning? In the long term, the experimentation that the agreement allowed helped build a case for this approach. Local leaders hope this experiment will lead to a steady supply of restoration contracts and material for local biomass businesses. Cooperative agreements are designed for pilots or trials, and other types of agreements might be more appropriate for larger-scale restoration work.

Opportunities for local workers and businesses

Both stewardship and participating agreements can emphasize economic development goals as primary objectives of a project. For the Hope Mountain and South Fork cases, CBOs encouraged the Forest Service to use stewardship and participating agreements respectively because they had options for prioritizing local jobs and workforce training. Lomakatsi was further able to support local livelihoods by looking for subcontracting opportunities that matched the skills of local loggers. These agreement structures rewarded the CBOs for their crews and training programs and helped build skills needed to secure future contracts. Also, stewardship agreements can be structured to legally require removal of material and receipts from the sale of timber or biomass can be reinvested in restoration.

Further, agreements can create space for CBOs to help businesses with the challenges they may face in doing restoration work. In the case of the Reservoir Biomass project, Wallowa Resources understood that participating in this pilot project could be risky for local contractors, since the actual costs and potential revenues were hard to predict. Because this agreement allowed them to contract directly with businesses and purchase the restoration byproducts, they helped insulate the contractors from this risk.

Challenges to creating social and livelihood benefits through agreements

Match requirements

Although match requirements have varied by agreement type, the Forest Service has typically requested a minimum of 20 percent from partners. Match includes cash, real or personal property, services, and/or in-kind contributions. CBOs are often small and have limited or less flexible resources, so they may face challenges in securing this level of match. In the case of ARRA, direction from the Washington office of the Forest Service allowed for as low as 5 percent in match from the voluntary partner with approval of the regional forester and permitted entirely in-kind contributions as match. National forests took a variety of approaches to this, with some waiving match entirely and others requiring 20 percent. Forest-level staff and regional leadership can significantly influence the level of match flexibility allowed.

Land management context

The land management context in which an agreement occurs will shape its outcomes. If national forests do not have established partnerships and collaborative approaches, they may not be able to achieve maximum benefits from agreements. For example, the rapidity of ARRA funding meant there was little time for the Forest Service and partners to choose projects that optimized mutual benefits. Where national forests had already collaborated on desired management approaches and planning areas, as in the Hope Mountain case, they were poised to use ARRA funding to accelerate high-priority work. In other instances, such as the South Fork case, the Shasta-Trinity National Forest had a limited program of work prepared, and had difficulty in putting together enough projects for the Watershed Research and Training Center to implement. One project (the felling of hazard trees along roadsides) has been subject to active public opposition.

Conclusions

Various agreement mechanisms allow the USDA Forest Service to partner with other agencies and nongovernmental organizations to undertake projects that provide mutual benefit. Given the Forest Service's increasing use of agreements, this paper sought to increase understanding of how these partnerships and agreement structures create community benefits. We found the following:

- Through agreements, CBOs helped the Forest Service plan and implement projects that fit local social agreement about forest management, enabling some projects to go forward without litigation or appeals, and leveraging local resources. Projects that successfully implement collaborative priorities may help build support for future stewardship
- Different types of agreements contain different mechanisms for creating community benefits, in the short and long term:
 - Participating agreements can designate workforce training and development as a primary objective, building greater local capacity to implement future projects
 - Stewardship agreements can be used to specify a range of best value criteria used for selecting projects and contractors according to local socioeconomic and ecological priorities, leading to opportunities for local businesses and organizations
 - Research and development agreements can allow for innovation around restoration and biomass utilization, which may support more active management in the future by creating improved product-removal techniques and increased understanding of costs and logistics associated with alternative implementation methods
- The outcomes of agreements will depend on the context in which they originate; underlying limitations in a national forest's planning process or a lack of robust partnerships may inhibit social or economic benefits.



Endnotes

- 1 Dana, S. 1918. Forestry and community development. USDA Bulletin 638, p. 35, Washington, D.C.; Force et al. 1993. The relationship between timber production, local historical events, and community social change: A quantitative case study. *Forest Science* 39(4): 722–42.
- 2 Moseley, C., and Y. Reyes. 2008. Forest restoration and forest communities: have local communities benefited from Forest Service contracting of ecosystem management? *Environmental Management* 42:327–43.
- 3 Typically, both the Forest Service and the partner in an agreement must bring financial resources to the table, and partner organizations are expected to provide a 20 percent match. In the case of ARRA, direction from the Washington office of the Forest Service allowed for as low as 5 percent in match from the voluntary partner with approval of the regional forester. In addition, for the ARRA funding they permitted in-kind contributions as match.
- 4 Each quarter, recipients of ARRA funding were required to report the hours of work that the funding created. This was calculated by dividing the number of hours of work done using ARRA funding by the number of hours a full-time employee would work in a quarter, usually 520 hours (forty hours per week for thirteen weeks.) Although these were reported as some amount of full-time equivalent, this reporting did not document if jobs were full-time and/or permanent.
- 5 We chose to examine these benefits because we could measure them through ARRA data and qualitative interview data. However, there are many other socioeconomic benefits that can be measured. For example, benefits may include multiplier effects of the value of contracts and workers' wages as businesses and workers purchase goods and services in the local economy; or indicators of the level of collaboration on projects.
- 6 We conducted interviews for the Hope Mountain case as part of a project directed by Susan Chamley with the USDA Forest Service. Please see *A socioeconomic assessment of Forest Service American Recovery and Reinvestment Act projects: eight case studies*. Available at treesearch.fs.fed.us/pubs/37857.
- 7 Forest Service agreements desk guide: Instructor guide. 2003. USDA Forest Service, p. 63. Available at fs.fed.us/business/standards/Agreements_Desk_Guide.pdf.



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