

SOCIAL AND ECONOMIC ISSUES IN LANDSCAPE SCALE RESTORATION



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2

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LANDSCAPE SCALE RESTORATION**

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Introduction

Restoration efforts through the Collaborative Forest Restoration Program (CFRP) and other New Mexico initiatives tend to occur within a single forest type or land jurisdiction. Increasingly, land managers and scientists have emphasized the need for restoration efforts that cross land jurisdictions and occur at a landscape scale. The Collaborative Forest Restoration Program may serve as a valuable catalyst for landscape scale restoration efforts, as it allows funding to be allocated across land jurisdictions within a single project.

Several projects have been funded through CFRP that are either multi-jurisdictional, landscape scale, or both. The 2008 CFRP Request for Proposals encourages projects that facilitate landscape scale efforts.

The purpose of this document is to assist prospective CFRP grantees in considering some of the important socioeconomic considerations that affect restoration at a landscape scale. Others considering landscape scale restoration in New Mexico may also find this tool helpful in project planning.



Overview of Social and Economic Issues in Landscape Scale Restoration

There are a number of social and economic issues that come into play when considering landscape scale restoration. For example, landscape scale restoration may include diverse communities and businesses that either work within the forest or utilize forest products. The socioeconomic landscape of restoration includes many different factors, similar to the pieces of a puzzle. Each of these pieces is unique and may affect the overall success of restoration efforts especially, but not exclusively, for those occurring at a landscape scale. Some of the most prominent factors include the following:

- **Sociocultural Context:** How does a community use a given landscape for cultural, subsistence, economic or recreational activities? Will the actions help protect a community from wildfire? Will communities support restoration actions?
- **Economic Scale and Capacity:** Is there infrastructure to support restoration through existing local businesses, equipment, and workforce? Is there potential for business

expansion to support restoration efforts? What trainings, grants, or equipment are needed to support economic development in the landscape?

- **Working Across Land Jurisdictions:** Which land management agencies are included within the landscape? Which different landowners need to be engaged or will be impacted? At what level will these landholders be involved in restoration efforts? Which areas have cultural and environmental clearances for treatment?
- **Including Diverse Stakeholders:** Are key stakeholders aware of and engaged in the process during the planning and implementation of restoration? Have all potential stakeholders been identified?



Sociocultural Context

Landscape scale restoration may potentially affect the cultural, subsistence, and recreational activities of a community or communities. Areas included in a landscape scale restoration effort may include areas important for ceremonial purposes; areas important for harvesting firewood, vigas, latillas, or other wood products; fishing; hunting; live-stock grazing; collecting piñon or medicinal plants; and areas used

for recreation such as hiking, camping, or picnic sites. In addition, the restoration project may affect a community's risk from wildfire. When planning any restoration effort, it is important to consider how the land is used and what potential impacts it may have on local people's ability to access, use, and safely live within the landscape. The multiparty process required of all CFRP grantees can help address these concerns and perspectives during the proposal development and project implementation stages.

When a project crosses land boundaries, it may also cross cultural understandings and priorities regarding the landscape. For example, a project that includes national forest, tribal land, and land grant property may find that the key stakeholders in each of these jurisdictions has different expectations about appropriate project goals and means for implementing them, based on their own social and cultural perspective. On tribal lands, community members or project staff may be concerned about the publication of sacred sites, culturally important species, or data on the quantity of water. Within the land grant and tribal communities, the issue of who is contracted to work on a project will likely be of central concern; in contrast, this may be important, but not a primary factor, to a public land management agency.

Economic Scale and Capacity

Many restoration efforts are currently funded through grants and are not self-sustaining. For example, one of the purposes of the CFRP is “to encourage sustainable communities” , where there is a trained local workforce capable of carrying out restoration treatments, local businesses that utilize and add value to small wood, and a local economy that can support restoration efforts without outside financial support.

When initiating landscape scale efforts, it is important to consider the economic landscape, which includes the number and varying capacities of the restoration workforce and wood utilizing businesses, their locations and areas of work. Landscape scale restoration often identifies large areas for treatment, yet the economic infrastructure may not be in place to support this volume of work locally. Consideration of these factors may lead a project to expand or reduce the amount of expected wood removal from sites, its seasonal acreage targets, or the type of wood products produced. CFRP projects in the proposal stage may want to look for existing workforce and businesses through currently funded CFRP projects to help determine the potential scale of their project. Some of the prominent factors that affect the ability to carry out restoration work include:

Workforce	<ul style="list-style-type: none"> • The need to hire and train workers (sometimes repeatedly) can impact the timeframe and budget of a project • A seasonal work cycle sometimes results in the subsequent loss of workers and the need to train new employees, which reduces business efficiency • The cost of workers’ compensation insurance can be prohibitively high; safety certification can reduce this cost • Crews may be mechanical (using chainsaws only) versus mechanized (with equipment such as feller bunchers, mulchers, etc.) and therefore have different timeframes, abilities, and impacts in carrying out work
Business Viability	<ul style="list-style-type: none"> • Sometimes businesses do not have sufficient equipment or the ability to repair equipment in a timely manner, which results in delays to the project and increased costs • Many existing mills are not set up for small diameter utilization; the cost for retooling mills should be considered • Inconsistent wood supply can be a significant barrier to long term business viability • Many projects struggle with the cost effectiveness of moving wood from treatment areas to processing sites • Many areas lack sustained markets that will purchase value-added products

All of these factors need to be considered and addressed for long-term economic viability of landscape scale restoration. Considering these factors may highlight gaps in a burgeoning restoration economy (such as certification or equipment) or conversely, may indicate areas where different businesses or harvesters can collaborate and thereby increase effectiveness and reduce costs.

Workforce and Business Viability are both affected by the seasonality of work and the subsequent supply of jobs and wood products. At a landscape scale, it may be possible to develop project areas that will be available for treatment throughout the year, resulting in a more consistent supply of work and material, and therefore more stable workforce and businesses.

“Landscape scale restoration may provide opportunities to increase the consistency of wood supply and business viability.”

The following organizations and websites provide support and information related to the economic viability of restoration:

- Forest Ecosystem Restoration and Analysis (ForestERA) – www.forestera.nau.edu
- Forest Guild – www.forestguild.org
- New Mexico Forest Industry Association (NMFIA) – <http://nmfia.net>
- New Mexico Forest and Watershed Restoration Institute (NMFWRRI) – www.nmhu.edu/nmfwri/cfrp.html
- Southwest Sustainable Forest Partnership – www.swsfp.org
- USDA Forest Products Lab – <http://www.fpl.fs.fed.us>
- Woody Biomass Utilization Program – www.nmbiomass.org



Working Across Land Jurisdictions

Landscape scale restoration can cross several land jurisdictions and ownership boundaries. CFRP grant recipients and others engaged in forest restoration will often work with at least one land owner or land management agency and potentially with several. When this is the case, substantial coordination between and among landholders will be needed. There are several factors to consider with each land management entity:

- *What are the established procedures for each agency involved?* Each agency may have different requirements or mechanisms for contracting labor, monitoring, or completing NEPA (the National Environmental Policy Act). It is important to ask about these procedures and to look for those that can help meet project objectives. For example, a service contract may be most appropriate for one project's goals, while a stewardship contract may be better for another, depending on the social and economic goals of the project as well as the proposed treatments in any one land jurisdiction.
- *Have archaeological surveys been completed?* All projects must comply with the National Historic Preservation Act. The results of these surveys may impact the types of actions allowed within a given area, or there may be areas that need to be set aside for historic preservation. Many land management agencies have already surveyed land and know this information at the start of a project. Other landholders may need to complete an archaeological survey before the start of a restoration project. This information may affect the timeframe and budget of a project as well as the specific locations of actions within a project area. The State Historic Preservation Office (<http://www.nmhistoricpreservation.org/>) is a good resource to help answer these questions.
- *Best Management Practices may affect wood value and the cost of forest operations.* Some Best Management Practices may limit areas where restoration activities can occur on a project site. For example, access to some valuable trees may be limited because they are located next to a riparian area. Construction and decommissioning of skid trails and landings also can affect the cost of operations.
- *Are there procedures that may result in forest closures or other delays?* Land management agencies have established procedures that may impact the timing of restoration. For example, when fire risk is high, national forests may be closed to the public, or may restrict work that involves chainsaws or equipment. Certain areas of a forest may also be closed during migratory bird nesting periods. The forest also may be closed to thinning or wood removal during wet or winter months. It is important to communicate with all land managers involved to learn how agency procedures and Best Management Practices may impact the specific area proposed for restoration. Additionally, each land jurisdiction may have different processes in place for public comment or appeal of a project. Objection to a project may result in delays in one area of a project while others may be able to move forward.
- *Are there opportunities or constraints with private land owners in the project area?* While CFRP funding is solely for treatment of public land, private landowners can be important partners to consider at the landscape scale. Private land treatments can complement CFRP-funded activities to accomplish larger scale land management objectives. The CFRP may act as a catalyst for treatment of private lands that are included within a landscape scale project's boundaries.

Sometimes private land owners have special concerns or interests in a restoration project that will be important to consider. For example, if private land is used for hunting, the landowner may be concerned that increased traffic on adjacent public lands from thinning crews and equipment will affect the wildlife on their private land. Some private landowners have specific concerns about prescribed fire and resultant smoke that could escape and enter their land boundaries. Landscape scale projects that contain private land set-asides may also be affected by conservation easements or right-of-way access. It is important to communicate with all adjacent landowners to discuss any concerns they may have. Some of these landowners may become valuable partners who want to become part of the restoration effort, adding greater continuity at a landscape scale.



Regardless of land jurisdiction, all project partners will need to comply with the National Environmental Policy Act (NEPA) because the policy requires an environmental analysis when federal money is spent for land management. In many instances, land management agencies have completed NEPA analyses for certain project areas, making them “NEPA ready” for forest restoration activities. When working with NEPA ready projects, it is important to consider how forest restoration activities fit within the parameters of existing NEPA-approved actions. Some NEPA ready areas were cleared for hazardous fuels reduction or pre-commercial thinning and some restoration actions, such as tree thinning, typically can occur within the approved actions. Other restoration actions such as slope stabilization and gully rehabilitation may require a specific NEPA inquiry.

When NEPA has not yet begun or is in process, it is important to talk to land management personnel to determine what a reasonable timeframe for restoration actions might be. In these cases, it may be necessary for the CFRP grant to include NEPA within the timeframe and budget of the grant



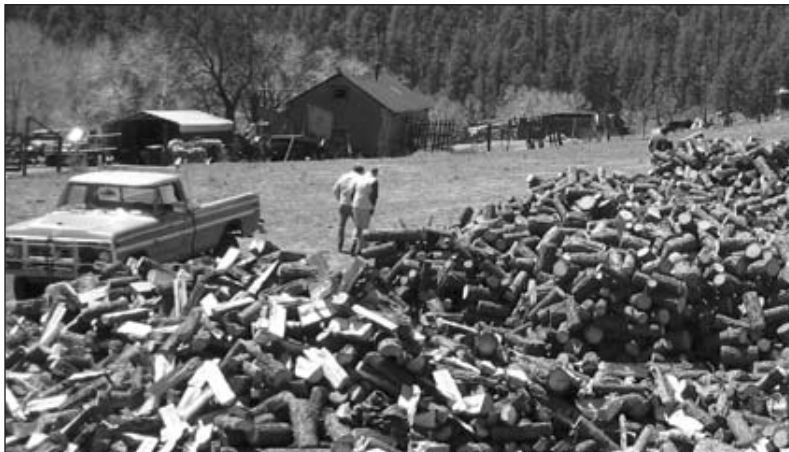
proposal. NEPA analysis can take up to one year or more, so it is important to be aware of this time constraint and the cost, ranging from \$20,000-\$40,000 or more, depending on the size and scope of the project area. It may also be helpful to submit an initial proposal to CFRP for NEPA and other analyses, and then to submit a subsequent proposal for project implementation. Whether NEPA is part of an existing project or a separate project in itself, ongoing communication will be needed between the grantee, the CFRP Regional Coordinator, and the land management agency requiring the NEPA analysis.

One of the opportunities available when working across land jurisdictions is that it may be possible to combine areas that are “NEPA ready” with those

that require NEPA analysis. Combining project areas across land jurisdictions in this way may help provide a more consistent supply of work and material for a more stable restoration economy. For example, the Santa Cruz and Embudo Watershed Restoration Project – CFRP grant # 16-07 – includes the Carson National Forest, Bureau of Land Management (BLM), and Truchas Land Grant within its project boundaries. When this project was approved for funding, NEPA analysis had been completed within the national forest and BLM lands, but had not begun for the land grant. In this example, on the ground restoration activities are able to begin on two land jurisdictions while NEPA and cultural clearances get completed on the third.

Including Diverse Stakeholders

Because landscape scale restoration crosses land jurisdictions and communities, diverse stakeholders need to be included from the beginning in the process of developing and implementing a project. A diverse group of interests is more likely to develop a comprehensive list of issues to consider in developing a restoration effort, can help avoid duplication of efforts and unnecessary competition, may promote greater efficiency, and can help build positive relationships among those involved.



It is important to involve stakeholders throughout the process of restoration as real partners, whose opinions carry equal weight, in order for the project to take into account the many perspectives and concerns different groups of people may have. Stakeholders may include:

- Individual community members and groups
- Landowners
- Local, county, state, and federal agencies
- Tribal governments
- Land Grant members
- Community elders
- Forest workers
- Environmental and conservation organizations
- Academic institutions and researchers
- Commodity interests

- Industry and small businesses
- Recreation and sporting interests

Project partners may want to consider existing CFRP projects – their locations, partners, and goals – and whether there are ways to build on existing ecological or socioeconomic work so that projects have greater impact.

Desired Future Conditions – Socioeconomic Considerations

All CFRP proposals must describe a Desired Future Condition for an area. This is a description of the current ecological and socioeconomic conditions of the proposed project area and the hoped-for future conditions of that same area.

The focus of a Desired Future Condition should remain within the project’s scope and impact. Desired social and economic conditions might include job creation, workforce training, business development, and community support for restoration. As with ecological conditions, it is important to identify project goals, and the steps needed to accomplish these goals. Many projects strive to develop a local economy based on restoration, with the necessary business infrastructure and workforce to accomplish this. Some desired outcomes can only be achieved when working at or considering the landscape scale. For example, sustainable businesses for wood utilization, predictable supply of work, and the modification of fire behavior all are outcomes that can emerge from a landscape scale but not necessarily from a small project.

Below is an example of potential desired future conditions for landscape scale projects:

Existing Socioeconomic Condition	Desired Future Condition
Forest restoration workforce may be too small to sustain landscape scale effort	Increased size of trained forest restoration workforce
Forest restoration workforce does not have sustained work throughout the year	Improved stability and timing of work throughout year by working across land jurisdictions
Small wood utilization businesses do not have sufficient year-round supply	Improved stability of wood supply provided by working in multiple land jurisdictions

Conclusion

Working at a landscape scale may provide opportunities to build partnerships, provide more consistent work and wood, and develop a more stable restoration economy. As with any restoration project, there are opportunities and challenges involved in working at a landscape scale. Larger scale projects require greater cooperation among entities and can occur at a scale that might overwhelm small businesses or crews. However, landscape scale projects can potentially draw from diverse land jurisdictions to provide a steady supply of work and wood and can build partnerships with a variety of different community and business groups that have different capacities and abilities. Careful consideration of each of these factors may contribute to the overall success of landscape scale restoration efforts.

New Mexico Forest and Watershed Restoration Institute

The New Mexico Forest and Watershed Restoration Institute at New Mexico Highlands University is dedicated to providing state-of-the-art information about forest and watershed restoration to the public, federal and state agencies, tribes, and private landowners in New Mexico. To accomplish this, the Institute collaborates with citizen stakeholders, academic institutions, NGOs, and professional natural resources managers to establish a consensus concerning prescriptions and monitoring protocols for use in the restoration of forests and watersheds in an ecologically, socially, and economically sound manner. Through research and collaboration, the Institute promotes ecological restoration and forest management efforts in ways that 1) will keep New Mexican homes and property safe from wildfire, 2) will lead to a more efficient recharge of New Mexican watersheds, and 3) will provide local communities with employment and educational opportunities.