

# Appendix II

## Recommended Measures, Data Sources, and Methods for Select Socioeconomic Monitoring Indicators

### Sample Goal: Increased economic vitality

**Table 3. Sample Indicator: Business Retention and Growth**

<b>Sample Measure</b>	<b>Sources</b>	<b>Method</b>	<b>Explanation</b>
Number of forestry and forest products businesses in existence in the community/project area since the project inception.	Department of State Forestry. In New Mexico, <a href="#">New Mexico's Wood Manufacturers Directory</a>  Other Forest Products – Chamber of Commerce, Community Participants, Community Leaders	Review current and past records from the State to identify trends in number and type of businesses by location.  Personal Interviews or Focus Groups. Include questions on type and number of forest product businesses.	Number and type of wood product producers can provide trends on different types of uses and insight in stability of market.  Restoration forestry may give rise to new types of forest product businesses that are not well recognized by traditional economic inventories.
Services offered by individual business and by forestry or forest products businesses collectively	Same as above	Same as above	Same as above
Number of new, related start-up businesses with business plans	New business owners	Personal Interviews. May be informal visits with new business owners.	The existence of a business plan indicates a long-range perspective.

**Table 4. Sample Indicator: Community Sustainability**

<b>Sample Measure</b>	<b>Sources</b>	<b>Method</b>	<b>Explanation</b>
Number of youth that use and maintain natural resource management skills.	Youth, employers, local schools.	Personal or Group Interviews. Comparison between the various sources on use of skills.	Opportunities for youth in restoration related fields may improve community stability
Variation in the types of value-added processing (saw mills, round wood, log homes, furniture, crafts, and architectural structures, etc.).	Local economic development agencies, Chamber of Commerce, Community Participants & Leaders.	Personal Interviews or Focus Groups. Include questions on type and number of forest product businesses.	Business diversity may be a measure of economic resilience

**Table 5. Sample Indicator: Financial Capital**

<b>Sample Measure</b>	<b>Sources</b>	<b>Method</b>	<b>Explanation</b>
Level (number of dollar amount) of public and private investments in forest restoration equipment and technology.	Grantees, community forest restoration businesses	Informal interviews. Include questions on type and amount of outside investment for forest restoration equipment/technology	Access to outside sources of investors can enhance local operators ability to expand to new or broader markets.
Levels of traditional private sector investment (banks, etc.).			Access to outside sources of investors can enhance local operators ability to expand to new or broader markets.
Levels of state and federal agency investment.	State and Federal Agencies. Economic Development Staff	Review of Annual Reports or Informal Interview	Access to outside sources of investors can enhance local operators ability to expand to new or broader markets.
Levels of country investments (also bonds and levies)	County Government – Assessors Office	Review of Annual Reports or Informal Interview with government office	Access to outside sources of investors can enhance local operators ability to expand to new or broader markets.
Levels of foundation/non-traditional investment in forest-related business.	Foundations & non-government offices.	Review of Annual Reports or Informal Interview	Access to outside sources of investors can enhance local operators ability to expand to new or broader markets.
Funders willingness to use existing resources for forest restoration-related purposes.	Funders	Review of Annual Reports or Informal Interview. Include broader area in review.	Funders who have supported forest restoration in the past may be more willing to do so again

**Table 6. Sample Indicator: Local Infrastructure**

<b>Measure</b>	<b>Sources</b>	<b>Method</b>	<b>Explanation</b>
Adequate public infrastructure to handle projects	Local & County Planning Departments, Federal & State Agencies	Review of planning documents and infrastructure databases	Available utilities may limit the potential for new restoration projects; transportation facilities can greatly affect cost of restoration
Adequate private infrastructure to handle projects.	Businesses and Operators	Personal Interviews. Questions on type of equipment.	Access to various types of equipment may be essential to complete a restoration project
Percent of total regional harvest (volume or value) processed by local companies.	Federal & State agencies	Review of annual reports and information on contract awards	Sales to non-local companies are less beneficial to the local economy.

<b>Measure</b>	<b>Sources</b>	<b>Method</b>	<b>Explanation</b>
Value-added processing within the community	Local economic development agencies, Chamber of Commerce, Community members	Personal Interviews or Focus Groups. Include questions on type and number of forest product businesses.	Value-added processing increases circulation of dollars within the local economy.
Diversity and quantity in species and sizes of wood raw material utilized	Department of State Forestry. More specific information – Project Leaders	Aggregate data from products spec sheets (usually compiled as part of the inventory process.)	The more value-added products the more cost-effective the restoration.
Processing capacity at each facility- i.e. small and large log limits, throughput limits, and run-time for each mill.	Department of State Forestry.  More specific information – local operators	Inventory and capacity information can be obtained through the State. Specifics on run time and limits need to be obtained via interviews with mill operators	Usually, the more restoration by-products a community can turn into value-added products, the more cost-effective the restoration.

## Sample Goal: Local industry and workforce capacity

**Table 7. Sample Indicator: Workforce Capacity**

Sample Measure	Sources	Method	Explanation
Size of local restoration workforce.	Project Leaders, Community Leaders, and Community members.	Personal Interviews or Focus Groups. Include questions on type and number of skilled forest restoration workers in area	Forest restoration skills are being lost in many communities, as employment opportunities do not exist over time.
Training levels and professional certification levels of local forest restoration workers.	Project Leaders and Community Members. State and Federal Training Facilitators	Personal interviews or surveys of community members. Records of State or Federal sponsored training.	Forest restoration skills are being lost in many communities, as employment opportunities do not exist over time.
Percent of all restoration projects that use mechanized harvesting, skidding, and loading equipment.	Grant Applications for awarded projects. Project Leaders, Program Managers.	Annually review applications from awarded projects. Annual reports from projects.	
Number of people trained in using mechanized equipment.	Project Leaders and Community Members. State and Federal Training Facilitators	Same as above	Forest restoration skills are being lost in many communities, as employment opportunities do not exist over time.

**Table 8. Sample Indicator: Value-added Forest Products Industry**

Sample Measure	Sources	Method	Explanation
Number of value-added processing companies available within a defined distance.	Department of State Forestry. e.g., see Lists of Forest Products at <a href="#">New Mexico's Wood Manufacturers Directory</a>	Plot location of restoration projects and value-added processors. Calculate distance utilizing GIS Spatial Tools.	Having a variety of value-added processors within a cost effective delivery distance, increases opportunities for products.
Total wood products production and value per unit for the community or project area.	Local wood products operators, wood products appraiser.	Survey local wood products operators on production. Apply wood products values to results	
Diversity in species and sizes of wood raw material utilized and Diversity of value-added production capacity	Department of State Forestry.  More specific information – Project Leaders	Aggregate info. from products spec sheets compiled as part of the inventory process.	The more value-added products the more cost-effective the restoration.
Processing capacity at each facility- e.g., small and large log limits for each mill.	Same as above.	Inventory and capacity information can be obtained through the State. Interview mill owners for specifics on run time, limits	Usually, the more restoration by-products turned into value-added products, the more cost-effective the restoration.

**Table 9. Sample Indicator: Market for Local Restoration Products**

<b>Sample Measure</b>	<b>Sources</b>	<b>Method</b>	<b>Explanation</b>
Number of forest-related businesses exploring new market options or market expansion.	Forest related business owners	Personal Interviews, Focus Groups, or Surveys. Questions on marketing and expansion of operations.	Exploring new market options may be an indicator of increased capacity, but it may also be a last-ditch effort to save a dying business.
Investment in marketing by forest-related businesses.	Forest related business owners	Personal Interviews, Focus Groups, or Surveys. Questions on marketing and expansion of operations.	Market Analysis can provide insight to opportunities for expansion or product production
Marketing analysis in forest-related business plans.	Forest related business owners	Personal Interviews, Focus Groups, or Surveys. Questions on marketing and expansion of operations.	Market Analysis can provide insight to opportunities for expansion or product production

**Table 10. Sample Indicator: Supply of and Access to Forest Resources**

<b>Sample Measure</b>	<b>Sources</b>	<b>Method</b>	<b>Explanation</b>
Time from start to finish for a project.	Federal Agency's NEPA Coordinators and Planning Staff.	Measure length of time from project initiation to final decision, review decision, award of project, and completion of fieldwork. Project initiation would be beginning of site specific scoping on the project.	Restoration projects frequently encounter delays, due to lengthy NEPA reviews and appeals, litigation, dramatic fluctuations in the lumber market, etc. These delays reduce the supply of products.
Time required to complete NEPA reviews.	Federal Agency's NEPA Coordinators and Planning Staff.	Measure length of time from project initiation to final decision, review decision, award of project, and completion of fieldwork. Project initiation would be beginning of site specific scoping on the project.	Restoration projects frequently encounter delays, due to lengthy NEPA reviews and appeals, litigation, dramatic fluctuations in the lumber market, etc. These delays reduce the supply of products.

## Sample Goal: Increase the equity of social and economic opportunities

**Table 11. Sample Indicator: Distribution of Work (both contracts and employment) Within the Community**

Sample Measure	Sources	Method	Explanation
Number of people receiving restoration-related work contracts for the first time.	Grant Program Manager or Advisory Board, and grantees.	Review of awarded projects. Identify awards that are first time to business or community group.	Dispersion of program to new entities may indicate program being accessible to all.

**Table 12. Sample Indicator: Distribution of Projects across Communities**

Sample Measure	Sources	Method	Explanation
Agency uses existing authorities and creates new authorities for reaching out to underserved communities.	Agency contract, partnership and agreement personnel.	Review of annual reports on contracts, partnerships and agreement documents as means to accomplish restoration.	Certain types of authorities, such as contracting, may not work well in some communities because they appear very complex.

**Table 13. Sample Indicator: Traditional Forest Users' Values Related to Forests, Forest Products, and Resource Use and Utilization of Their Knowledge and Practices in Restoration Projects**

Sample Measure	Sources	Method	Explanation
Traditional forest users have been consulted regarding the project and agree their input has been incorporated.	Traditional Forest Users	Personal Interviews or Focus Groups.	Traditional knowledge is often qualitative and does not lend itself easily to analytical processes.
Number of projects that included traditional knowledge within the required social analysis	Agency NEPA and Planning personnel.	Review project planning record	Traditional knowledge is often qualitative and does not lend itself easily to analytical processes.
Forest restoration project managers have adequately consulted with all Native American interests and have adequately responded to questions and concerns raised by Native Americans.	Agency NEPA & Planning personnel, and Tribal Governments.	Review project planning record for tribes consulted & issues raised. Interview tribal governments to determine how issues were addressed & how tribes perceive responses.	Formal consultation is a requirement of Federal Agencies. This represents a government-to-government relationship. Consultation not consensus is required.
Project implementation provides opportunities for Native American businesses and individuals.	Grant Program Manager and Native American businesses and individuals.	Review "Request for Proposal" mailing lists for presence of Native American businesses and individuals. Surveys businesses & individuals about perceived opportunities	Native Americans are traditionally an underserved community in parts of the United States.

## SAMPLE GOAL: Improved Quality of Life

**Table 14. Sample Indicator: Employment Conditions in Restoration-related Industries for local and mobile workforce**

<b>Sample Measure</b>	<b>Sources</b>	<b>Method</b>	<b>Explanation</b>
Number of local operators that use and are trained to use appropriate safety gear.	OSHA, Local Operators, Local Field Workers.	Review OSHA Safety Inspection Reports. Survey of operators and field workers.	Safety on the job site is one of the factors that can affect quality of life.

**Table 15. Sample Indicator: Community Access to Forest Resources**

<b>Sample Measure</b>	<b>Sources</b>	<b>Method</b>	<b>Explanation</b>
Number (or percentage) of homes to which the project provides fuel wood.	Project leader	Provide tally of homes that receive fuel wood from the project.	Access to natural resources such as fuel wood can be an important component of quality of life in rural communities.
Number of families who have access to locally important non-timber forest products.	Community members.	Personal Interviews, Focus Groups or surveys with questions on access to forest products.	Access to non-timber forest products can be an important component of quality of life.
Number of restoration businesses operating at full production capacity.	Restoration Businesses	Personal Interviews or Focus Groups with questions on capacity and current demand.	Businesses operating consistently at or near capacity may indicate opportunity for further growth.

**Table 16. Sample Indicator: Risk of Catastrophic Wildfire**

<b>Sample Measure</b>	<b>Sources</b>	<b>Method</b>	<b>Explanation</b>
Number of acres of defensible space created.	Fuel Specialists – Defensible space standards.	Fuel Inventory within wildland urban interface areas.	Defensible space provide greater opportunity for fire fighters to save a home from fire.

## SAMPLE GOAL: Improved Community Connection to the Forest

**Table 17. Sample Indicator: Community Understanding of Forest Health Issues**

<b>Sample Measure:</b>	<b>Sources</b>	<b>Method</b>	<b>Explanation</b>
5.2.5 Number of trees poached from thinning sites.	Law Enforcement Officers, Timber Staff personnel	Tally of incidents where poaching of trees from a site was confirmed.	In the Southwest, poaching of large trees from forest restoration sites is a common problem. A reduction in the rate of poaching, therefore, may measure the extent to which community members understand the thinning prescription and Ss of the restoration project.

**Table 18. Sample Indicator: Educational and Training Opportunities in the Forest Restoration**

<b>Sample Measure</b>	<b>Sources</b>	<b>Method</b>	<b>Explanation</b>
Number of local residents who receive training in prescribed burning.	Forest Service, State, and local fire personnel.	Tally of local residents who attend certified courses offered by certified trainers.	Training in restoration related skills may increase community's ability to accomplish projects.
Number of local residents who receive Forest Service red cards.	Forest Service Fire Personnel	Tally number of local residents, non-agency, that receive red cards on annual basis.	Training in restoration related skills may increase community's ability to accomplish projects.
Number of local residents who receive training in thinning techniques and demonstrate an increased understanding of thinning through field evaluations.	Project leader, local residents.	Tallying of number of residents that receive training and evaluation by project leader on understanding and application.	Training in restoration related skills could increase community's ability to accomplish projects.
Hours of training or educational opportunities provided.	Project leader, agency training specialists, and personnel managers.	Number of hours or number of classes offered in various restoration areas.	Training in restoration related skills may increase community's ability to accomplish projects.
Types of training and educational opportunities provided.	Project leader, agency training specialists, and personnel managers.	Number of hours or number of classes offered in various restoration areas.	Training in restoration related skills may increase community's ability to accomplish projects.

**Table 19. Sample Indicator: Level of Community Participation in Forest Restoration**

<b>Sample Measure</b>	<b>Sources</b>	<b>Method</b>	<b>Explanation</b>
Number of people attending community meetings about forest restoration project.	Agency NEPA and Planning personnel	Review project records for attendance lists for community meetings on restoration projects.	Community meetings are a common format for participation.



<b>Sample Measure</b>	<b>Sources</b>	<b>Method</b>	<b>Explanation</b>
Number of permits issued for collecting fuel wood.	Agency Resource Clerks	Tallying number of permits issued for fuel wood (database)	Gathering fuel wood is a common activity in many rural communities.
Number of people who participate in forest maintenance projects (e.g., raking pine needles, cleaning irrigation ditches...)	Community members	Survey of community members on their participation on an annual basis.	Participation in community projects enhances community bonds and sense of community.
Number of households who receive fuel wood from the community.	Community members	Survey of community members – Question where they receive fuel wood.	Fuel wood is a traditional use in many rural communities.
Number of community-based projects started or maintained since inception of forest restoration project.	CRFP Program Manager	Annual Reports and 5 Year Monitoring Report	
Diversity of stakeholders/groups contributing to the project.	Project Leader, Stakeholder groups	Annual report by project leader on groups involved in project.	Participation in restoration work should represent various communities that share this interest.

## Sample Goal: Increased Capacity for Collaboration

**Table 20. Sample Indicator: Quality and Timeliness of USDA Forest Service Communication**

<b>Measure</b>	<b>Sources</b>	<b>Method</b>	<b>Explanation</b>
Time elapsed from when a question is asked until it is answered in relation to this project.	Project leader, Agency Contact.	Project Record Timesheet. Participant observation and record of communication between parties.	Business operations need to be performed in an efficient manner to promote cost effectiveness and to further business growth.
Important documents pertaining to restoration projects are available in the primary language spoken in the community.	Grant Program Manager and support staff	Program records; Request for Proposal, Award Letter, and other communication available and sent to grantee in preferred language.	Utilizing primary language of recipient can enhance communication.
Percentage of project-related meetings per year attended by both agency decision makers and community leaders.	Restoration project record system. Meeting Attendance Lists	Tally of meetings where both agency decision maker and community leaders attended. Report on annual basis.	Successful collaborative projects require commitment throughout both parties. Decision points need representation by both parties.
Number of days between proposal submission date and notification date.	Grant Program record and correspondences.	Tally number of business days between request for proposal, submission and award.	Communities have a limited amount of capacity. Escrowing part of this capacity in a submission reduces ability to respond to other opportunities.
Length of time between invoice submittal to agency and payment by agency.	Restoration project record system and Agency's correspondence database.	Tally number of business days between invoice submittal and payment.	Small businesses have limited capital to draw upon for investments. Efficient payment is needed to respond to other opportunities.

## Sample Goal: Support for multiparty monitoring

**Table 21. Sample Indicator: Commitment to Monitoring**

<b>Measure</b>	<b>Sources</b>	<b>Method</b>	<b>Explanation</b>
Time elapsed between project implementation and development of monitoring plan.	Restoration project record system.	Tally time between project award and development of monitoring plan.	Monitoring needs to be part of the overall purpose of the project. The monitoring plan should be developed prior to project implementation.
Percentage of budget-in actual dollars and in staff time-devoted to monitoring.	Restoration project record system.	Accounting review of project budget and staff commitments.	Monitoring needs to be part of the overall purpose of the project.
Frequency with which monitoring committee meets.	Restoration project record system.	Review of staff time commitments and meeting dates.	Monitoring needs to be part of the overall project .
Frequency and methods with which monitoring committee reports its findings.	Restoration project record system. Monitoring Plan	Review of monitoring plan and annual reports to funders and communities.	Monitoring needs to be part of the overall purpose of the project.

**Table 22. Sample Indicator: Technical Assistance in Forest Ecology, Fire Behavior, Monitoring Methods etc**

<b>Sample Measure</b>	<b>Sources</b>	<b>Method</b>	<b>Explanation</b>
Record of technical or educational presentations by ecologists and other experts.	Restoration project record system.	Review project record and record number and type of presentations	Consulting experts and exchanging information can improve outcomes of this and future projects.
Hours spent with technical experts discussing restoration-related issues.	Restoration project record system.	Review project record and staff's calendars and record events.	Consulting experts and exchanging information can improve outcomes of this and future projects.
Number of sources used for technical assistance.	Restoration project record system.	Review project record and record number and type of sources used.	Consulting experts and exchanging information can improve outcomes of this and future projects.