

1. Proposed Treatment

The Forest Service and partners for the “**Uncompahgre Plateau Collaborative Restoration Project**” intend to enhance the resiliency, diversity, and productivity of a priority landscape. The Plateau is located within five counties on the Western Slope of Colorado and includes key watersheds that feed the Colorado River (see attached vicinity map). The expansion and application of a science-based ecosystem restoration project is vital to forest health and the communities of western Colorado. “Relationship building” on the Grand Mesa, Uncompahgre and Gunnison National Forest (GMUG) has yielded many acres of NEPA-ready projects, and we are now ready to take action. This “**Uncompahgre Plateau Collaborative Restoration Project**” is cradled in science, creates jobs while supporting local industry; reduces fuels and ultimately restores a landscape that will support large-scale beneficial fire. We will apply adaptive management to guide our actions and monitor our efforts. We intend to reduce forest management expenditures, including wildfire suppression costs, support local industry, and engage new economic opportunities. This project will afford active management of forests and rangelands, while creating greater resiliency to natural and man-caused disturbances with an eye towards warmer and drier climatic conditions predicted in the future.

This **Uncompahgre Plateau Collaborative Restoration Project proposes ten years of projects, spanning 572,000 acres of NFS lands within a 1.0 million acre landscape**. Active restoration projects on 160,000 acres of NFS lands, including: prescribed burns, mechanical treatments, timber harvests, invasive species treatments, native plant establishment, trail and road relocations to reduce sediment, riparian restoration, and improvements for Colorado River cutthroat trout. Multi-party monitoring efforts are proposed for 68,000 acres.

Cooperative relationships on the Western Slope of Colorado have been developing over the past 15 years beginning with the formation of the Public Lands Partnership and Uncompahgre Plateau Project (UP Project) in the mid-1990s. Strong bonds and trust have been created among community members, public land managers, environmentalists, academia, agency researchers, recreation groups, local governments, energy industry, ranchers, timber companies, and the general public. The Uncompahgre Plateau Collaborative Restoration Project has all the necessary elements in place to make the project vision a reality. These elements include **86,700 acres of NEPA-ready forest restoration and WUI projects**; a native seed program with many species of grasses and forbs ready to apply to the landscape; an existing and active invasive species eradication program; a Travel Management Plan and Fire for Resource Benefit Plan in place; and, our area has the two largest remaining Forest Products Industries in the State to make this effort economically possible.

The landscape strategy will apply the UP Project’s model “Uncompahgre Mesas Collaborative Forest Restoration Demonstration Project” (Unc Mesas Project) as a guide for future restoration efforts on NFS lands. This model, which has brought numerous diverse partners together, effectively working in a manner of trust, is partially responsible for the large amount of NEPA-ready acres in this proposal and provides collaboratively-developed restoration guidelines, which will be used for future proposed restoration projects. The Unc Mesas Project, which is one of the largest projects included in this proposal, was developed with the guidance of the Colorado State University’s Colorado Forest Restoration Institute (CFRI) and includes 17,000 NEPA-ready acres of mixed conifer and ponderosa pine, critical to restoring natural fire regimes on the Plateau. The Unc Mesas project will be expanded upon substantially over the next 10 years, with 78,000 acres of new NEPA planning to begin in 2012.

The proposal includes critical fuels reduction treatments along two energy corridors. Tri-State Generation and Transmission Association (Tri-State) operates a 115 kV transmission-class line that delivers power to local and regional energy providers such as Delta-Montrose Electric Association (DMEA) and San Miguel Power Company. The other corridor includes a 345 kV line owned by Western Area Power Association (Western). This line primarily transmits power originating from federal hydro-generation facilities in Colorado and transports this energy to high demand areas from Nevada to California. This line is an important component of the national grid of power lines supplying energy to areas with critical needs. These power line projects have NEPA-ready acres that support WUI areas of critical power line infrastructure.

The UP Project's Native Plant Program has been a national leader in development of native seed production. Comparison and production studies have resulted in the collection and propagation of 13 species of native seed (grasses and forbs), which have now been released to commercial growers. As seed is produced, it will be available for restoration projects on the Uncompahgre and Colorado Plateau. These species are considered key components of native ecosystems in the Colorado Plateau area. There are currently three Coordinated Weed Management Area Plans on the Uncompahgre Plateau landscape. These Weed Management Plans use multiple techniques to control the spread of invasive noxious weeds, including chemical and biological control measures critical to restoration and preventive measures to control invasive species.

The towns of Montrose and Delta lie at the base of the Plateau and are home to the last remaining large sawmills in Colorado. Intermountain Resources, located in Montrose, processes a variety of forest products from two states. Delta Timber utilizes most of the aspen cut in Colorado and is important to work on Sudden Aspen Decline. A locally sustainable supply of wood products from the Western Slope is critical to the economics of the Intermountain mill and meeting forest health and safety objectives associated with the bark beetle epidemic across the State of Colorado and in southern Wyoming.

The GMUG National Forests completed the Uncompahgre Plateau Travel Management Plan in 2002, and its vision is important to restoration efforts across the Plateau. Proposed treatments include decommissioning 130 miles of road, relocating 1.5 miles of road to benefit riparian habitat, and erosion control on 100 miles of trails. All travel management decisions have been made and are ready for implementation.

Previous NFS restoration efforts on the Uncompahgre Plateau have been limited and concentrated around private inholdings and infrastructure to provide fuels reduction, WUI protection benefits and mule deer habitat enhancement. In addition, several weed management areas have been intensively treated for invasive species, including spotted knapweed, yellow star thistle, and others. In 2004, NEPA analysis for Spring Creek/Dry Creek Landscape was completed and fulfilled a variety of on-the-ground restoration and vegetation management treatments. These combined treatments, totaling 20,000 acres on NFS, BLM and private lands, will complement future projects implemented with CFLRP grant fund projects.

Collaboratively-developed **restoration goals** of the project are to:

- Enhance the resiliency, diversity and productivity of the native ecosystem on the Uncompahgre Plateau using best available science and collaboration.
- Reintegrate and manage wildfire as a natural landscape scale ecosystem component that will reduce the risk of unnaturally severe or large crown fires.
- Restore ecosystem structure, composition and function. The protection and restoration of ecosystem structure, composition and function encourages viable populations of all native species in natural patterns of abundance and distribution.
- Preserve old or large trees while maintaining structural diversity and resilience; the largest and oldest tress (or in some cases the tress with old-growth morphology regardless of size) would be protected when feasible from cutting and crown fires, focusing treatments on excess numbers of small young trees where this condition is inconsistent with Historic Range of Variability (HRV) conditions.
- Reestablish meadows and open parks and re-establish grasses, forbs, and robust understory communities.
- Manage herbivory. Grass, forbs, and shrub understories are essential to plant and animal diversity and soil stability. Robust understories are necessary to restore natural fire regimes and to limit excessive tree seedling establishment. Where possible, defer livestock grazing after treatment until the herbaceous layer has established its potential structure, composition, and function. Project partners will work with the CDOW to manage big game populations to levels that will contribute to successful restoration treatments.

Specific treatment objectives for the major vegetative communities within the project area as well as examples of proposed types of projects include:

Sagebrush. Restoration treatments are needed to improve the understory, increasing available forage for both wildlife and domestic livestock. The GMUG will work closely with the CDOW to target key Gunnison sage-grouse habitat areas as well as take advantage of biomass potential of pinyon-juniper in reestablishing key openings. At least 1,800 acres of sagebrush treatments are planned, mostly mechanically treated.

Pinyon-Juniper (PJ). The PJ cover type is currently the largest cover type on the Plateau. Funds will be used to masticate 2,500 acres. This will create a more natural, complex patch mosaic of seral age classes with improved spatial heterogeneity that favors natural, moderate sized (500 to 1,000 acres) wildfires. The treatment units will also be designed to reduce invasion into other cover types.

Mountain Shrub (MS) (oak/service berry/mountain mahogany). Mastication projects with follow-up prescribed burning are proposed on 7,000 acres to mimic natural fire disturbances, and result in a patch mosaic with 10 to 15 percent of MS in early seral stage. The resulting mosaic will improve forage and grazing and also limit the size of large crown fires when they occur.

Ponderosa Pine (PP). Restoration in the PP cover type will reduce tree density; improve spatial heterogeneity where it exists; protect old-growth ponderosa pine; increase structural diversity in the long term; and create fuel conditions that reduce the likelihood of uncharacteristic fires, by reestablishing the high-frequency, low-intensity historic fire regime. Both commercial and noncommercial treatments will be accomplished with mechanized equipment. As a means of reintroducing fire to the landscape, post-harvest prescribed fire will occur. The intent is to reduce surface and ladder fuels, create conditions favorable to the growth of grasses, forbs, and shrubs, and then to continue using wildfire as a management tool to maintain these ecosystems overtime. 7,700 acres of PP treatments are NEPA-ready, and over 15,000 acres of PP treatments are proposed.

Mixed Conifer (MC) (Ponderosa Pine/Aspen/Douglas Fir/Blue Spruce/Engelmann Spruce/Sub-alpine Fir). Restoration treatments in the MC cover types will reduce tree density and develop more open conditions characterized by multi-age structure and multi-species tree composition. Because the future climate is expected to be hotter and drier, treatments will create conditions favorable to Douglas-fir, ponderosa pine, and aspen regeneration over blue spruce. Prescriptions will generally favor the perpetuation of aspen on the landscape by encouraging regeneration. Both commercial and noncommercial treatments will be accomplished with mechanized equipment. Most areas will receive follow-up broadcast burning. The fire regime in the cooler, moister mixed-conifer forest was undoubtedly a less-frequent mixed severity regime; fire in places would creep through mixed conifer forest, consuming little fuels and killing only small trees while in other areas torching and killing groups or patches of large trees. The reduction in surface, ladder and canopy fuels will result in a lower risk of stand-replacing fire and will create the conditions necessary to reinitiate the historic mix severity fire regime. Over 4,000 NEPA-ready restoration projects include the Unc Mesas Project and treatments along Western power lines; over 11,000 acres of MC treatments are included in this proposal.

Aspen. There is an urgent need to treat aspen stands, which are predominantly 80 to 120 years old and therefore less resilient to Sudden Aspen Decline (SAD). SAD is a relatively recent phenomena, not described by regional insect and disease experts until 2007. Foresters estimate that approximately 37% of the aspen cover type on the Plateau is impacted by SAD and predict an increasing amount of mortality caused by SAD in the future. There is an immediate need to regenerate aspen stands through harvest, other mechanical treatments and/or fire to stimulate regeneration; early seral stage needs to increase by about 10-fold. In the absence of some disturbance, these stands will eventually succeed to shrub or conifer dominated cover types. Approximately 11,000 acres of NFS aspen projects are planned, including over 600 NEPA-ready acres.

Spruce-Fir (SF). Management activities that increase diversity in age, size and seral conditions are critical for ameliorating wildfire spread and insect/pathogen outbreaks. There is excellent potential for biomass utilization and stewardship contracting. Funds generated from these commercial harvests will be used to offset the cost of restoration work in the ponderosa pine and mixed-conifer. Approximately 4,000 acres of SF are proposed for treatments, of which 550 acres are NEPA-ready.

Multi-party Monitoring. The landscape strategy will ensure multi-party monitoring and adaptive management for each vegetation type, using the Unc Mesas model for “citizen science,” including monitoring plots. A long-term citizen scientist, multiparty ecological monitoring program and workgroup have already been developed, providing a core group for monitoring. The Unc Mesas workgroup teamed with Colorado Forest Restoration Institute (CFRI) has developed a protocol, which involves monitoring vegetation pre-treatment, and post-treatment, over-story and understory vegetation, as well as down woody debris information. Baseline data will be recorded prior to treatments. Monitoring will continue periodically over 15 years, following completion. Permanent transect markers will be established to continue monitoring efforts indefinitely. CFRI will compile, analyze and store the monitoring data. The goal of monitoring will be to determine if desired conditions have been met, to inform adaptive management and to continue to educate and involve partners.

Beneficial Outcomes of the Uncompahgre Plateau CFLR Proposal include:

- 1) Landscape-scale restoration and maintenance projects on over 160,000 acres of NFS managed lands.
- 2) Restored and maintained forest conditions, with reduced tree density and fuels hazards, will enable broader use of prescribed fire and wildfire, providing more natural ecological functions and reduced fire fighting cost with approximately 27,300 acres of mechanical treatment and 55,000 acres of broadcast burning planned.
- 3) Fuels treatments in WUI areas, including 650 acres of power line treatments, in coordination with Community Wildfire Protection Plans (CWPP).
- 4) Water quality, water yield, and stream habitat enhancement within key Colorado River watersheds.
- 5) Weed treatments on over 9,200 acres and reseeded with native seed.
- 6) Collaborative multi-party monitoring by collecting pre-treatment and post-treatment information to assess effectiveness of restoration over a 15-year period (establish historic conditions and range of variability; determine current baseline vegetation conditions).
- 7) Outcomes that benefit threatened, sensitive and endangered species, including Gunnison sage-grouse, desert bighorn sheep, and Colorado River cutthroat trout.
- 8) Development and integration of climate change adaptation and mitigation strategies.
- 9) A biomass supply assessment of the Plateau (funded through a Rocky Mountain Research Station Grant) will inform investments in new bioenergy infrastructure and quantify potential climate change adaptation and mitigation benefits of biomass utilization.
- 10) Approximately 292,000 CCF of biomass will be created (approximately half of which is sawlog volume), and projects will support the enlargement of biomass markets and sustain local timber mills.
- 11) Project implementation through stewardship contracting and other means will require hiring of field crews; over 750 part-time/seasonal jobs will be created.
- 12) Local youth will be involved in projects, providing work, job skill training, and educational opportunities.
- 13) Strengthened partner relationships and collaboration between all involved parties with meetings, field trips, outreach and technology transfer.

Overall project success will be measured by meeting several key objectives, including; 1) moving toward desired vegetation and fuels conditions, including the reestablishment of native grasses and forbs; 2) sustaining timber mills and creating new biomass markets; 3) reducing long-term fire suppression costs; 4) decreasing catastrophic fire potential and utilizing wildfire for resource benefit; 5) improving wildlife habitat; and 6) adaptive management to adjust to climate change.

"Inclusion of and collaboration with as many partners as possible is a win-win strategy for industry, the forest, and environmentalists, advancing knowledge of effective methods of reforestation. One of our members who volunteered with the Uncompahgre Plateau Project said: 'Isn't this the way all forests should be managed?' This project could become a model that can be replicated around the nation. What an exciting prospect! "
Robert Peters, Executive Director, Western Slope Environmental Resource Council

2. Ecological Context

The Uncompahgre Plateau is an ideal landscape to conduct broad-scale planning and ecosystem restoration and fuels treatments that will produce ecological and socioeconomic benefits. The Plateau supports many vegetation types, including pinyon-juniper, ponderosa pine, Douglas-fir, subalpine fir, aspen, Engelmann and blue spruce. It has a long history of logging, grazing, water development, and recreational uses. The Plateau includes 572,000 acres of NFS land, 260,000 acres of BLM land, 10,200 acres of state land, and 185,000 acres of private land. In addition there are two Congressional Designation Areas, including the “Roubideau Area” and “Tabeguache Area.”

Many forest types on the Plateau have been altered by human and natural disturbances, including logging, grazing, fire exclusion, insect and disease, wildfire, drought, climate change and other agents. Several recent studies have found that the Plateau’s forests are outside of historic patterns of structure and composition and have increased potential for high intensity wildfire and insect/disease damage. There is broad agreement that active management is needed to restore ecosystems, increasing their resiliency to future disturbances and protecting WUI areas. These actions would also contribute to protecting or enhancing watershed health for maintenance of fresh water flows.

Key findings from comprehensive assessments and current information for the Plateau include the following:

- The lack of fire disturbance from approximately 100 years of fire suppression efforts has resulted in 71% of all forest and woodland cover types having dense canopy closures, with very little early seral conditions in any cover type on the Plateau.
- The ponderosa pine cover type has been altered by past timber harvest, associated road construction, livestock grazing and fire suppression. Over 100 years of fire suppression have interrupted the frequent fire regime, resulting in large amounts of fuel accumulation in understories and much denser stand conditions than would have occurred historically. These stand conditions are susceptible to uncharacteristic high intensity stand replacement wildfire, as demonstrated in 2002 when 13,000 acres of this cover type burned in the Burn Canyon fire.
- Current stand conditions in mixed conifer are primarily late-mid seral stages, which are ripe for fire, insect and pathogen outbreaks. There has been a drastic increase in biomass, particularly in smaller diameter classes. Species composition has shifted away from frequent, low-intensity fire-adapted species (ponderosa pine) and fire regenerated seral species (aspen) to non-fire tolerant, infrequent, high-intensity fire species (sub-alpine fir, Engelmann and blue spruce).
- Current spruce-fir stand conditions are susceptible to outbreaks of various insects and pathogens. Outbreaks of western spruce budworm and sub-alpine fir decline have been increasing over the past decade, causing substantially increased wildfire hazard. A majority of this cover type is late-mid to late seral stages, which set the stage for fire and insect and pathogen outbreaks.
- Aspen in lower elevations has experienced dramatic loss due to Sudden Aspen Decline (SAD). In lower elevations, natural succession by oak/grass/forb/shrub communities is occurring, and in upper elevations, succession to conifers, spruce and fir is occurring. There is an immediate need to restore aspen stands through harvest, other mechanical treatment, or fire to stimulate aspen regeneration.
- A comparison of conditions between 1937 and 1994 indicates that pinyon-juniper has expanded into areas formerly dominated by shrublands and grasslands, and the density of pinyon-juniper stands has increased. These changes have decreased the amount of available forage for both wildlife and domestic livestock and have resulted in loss of Gunnison sage-grouse habitat.
- Historically, pinyon-juniper cover type had a patchy distribution of different aged stands. Currently, most (95%) of pinyon-juniper on the Plateau is in late seral conditions of continuous dense even-aged stands.
- Sagebrush currently occupies less area than it did historically due to past range treatments, including spraying to eradicate sagebrush and seeding of non-native grass and forb species. Pinyon-juniper has also encroached into sagebrush stands due to fire suppression, and some areas of the Plateau have become dense stands of pinyon-juniper where sagebrush stands were historically located. Restoration will benefit the Gunnison sage-grouse (a species of special concern in Colorado and a Sensitive Species in Region 2 of the NFS.)

- Mountain shrub cover type has been altered by past livestock grazing and fire suppression. As a result, there is a lack of earlier seral conditions, less diversity between stands and many stands are much denser than occurred historically. These cover types, especially those dominated by Gambel oak, are very susceptible to intense stand replacing fires, which could also carry more extensive wildfire into higher elevation timber types.
- This area of Colorado has one of the highest incidents of wildland fire starts in the state, with fuel conditions that are conducive to large fire incidents. Population of the communities surrounding the Plateau is expected to double in the next 25 years, increasing the pressure on the wildland/urban interface.
- Understory herbaceous species composition has been altered as a result of livestock grazing and rangeland projects and activities that introduced non-native plant species. These areas are highly susceptible to invasive plant species, with cheat grass, knapweeds, and thistles being of particular concern.
- Noxious and invasive weeds on the Plateau are an increasing problem and can reduce the quality of wildlife habitat. Noxious weed infestations on NFS and BLM land are expanding and threatening drainages.
- Stream restoration efforts will benefit the four major watersheds of the Plateau; these four primary drainages of the Colorado River (Dolores, Gunnison, San Miguel and Uncompahgre Rivers) contain important fish habitat, including Colorado River cutthroat trout, a species that now occupies less than five percent of its historical range.

Watershed Restoration. The Uncompahgre Plateau contains four major drainages to the Colorado River: Dolores, Gunnison, San Miguel and Uncompahgre Rivers, as well as 830 miles of perennial streams and 2,500 miles of intermittent streams. These headwater streams are extremely important in supplying water and sediment to downstream river segments. A Comprehensive Assessment, completed by the GMUG in 2006, identified riparian and watershed values and prioritized stream segments for restoration. CFLRP support would be used to enhance water quality, water yield, reduce sedimentation, and improve riparian habitat for the Colorado River cutthroat trout, river otter and other native riparian species. Specific projects include treatments for approximately 320 acres of riparian habitat and over 30 miles of stream. Riparian projects involve the relocation of roads and vegetation management.

This project will improve watershed conditions by improving moisture retention and reducing runoff and erosion, especially in the semi-arid pinyon-juniper woodlands, reducing the threat of major wildfires that burn entire watersheds and change soil characteristics and addressing the threat of invasive plant species that impact both upland and riparian species. There are also potential benefits associated with increasing water production, although this landscape has somewhat limited potential for increasing water yields through vegetation management. Reducing motorized vehicle travel routes, mitigating effects where they disrupt surface or subsurface hydrologic paths, and disconnecting them from the drainage network is also an important restoration objective.

Invasive Species Control. Weed management efforts will be integrated into restoration treatments, with over 9,000 acres of invasive species proposed for treatment. Currently, Coordinated Weed Management Plans (CWMPs), facilitated by the UP, cover approximately 100,000 acres of NFS land and another 400,000 acres of BLM, state, and private lands across the Plateau. Through a collaborative landscape approach, the UP Project has facilitated cooperation among all land managers and private landowners for the detection and prioritization of invasive species as well as treatment strategies, monitoring efforts, public education and prevention tactics. Invasive species will be treated prior to and post mechanical and prescribed fire treatments. Prevention and monitoring efforts will be ongoing. This project will address tamarisk along drainage courses and around ponds on NFS lands.

Use of Native Plants. This project will enable 37,500 acres of reseeded with native plants, facilitated by the efforts of the Uncompahgre Plateau Native Plant Program (UPNPP). The UPNPP is a collaborative partnership committed to the development of an adequate supply of seed of a variety of species native to the Colorado Plateau for seeding activities on public and private land. The UPNPP conducts studies to investigate basic plant characteristics and effective methodologies to produce profitable crops of native seed by defining appropriate

seeding, harvesting, collection and cleaning techniques. The UPNPP then provides source-identified seed and data on cultivation practices to commercial growers. For example, in the fall of 2009 seed from the program's first commercial crop, UP Colorado Sandberg bluegrass, was purchased by the UP Project and distributed to 4 different agencies for use in 14 different seeding projects across western Colorado. Additional goals of the UPNPP include the enhancement and recovery of the Gunnison sage-grouse and mule deer habitats, particularly in the sagebrush and pinyon-juniper ecosystems.

Climate Change Adaptation/ Mitigation Strategies. Through these proposed efforts, the GMUG will: 1) integrate efforts to adapt the diverse vegetation communities of the Plateau to potential warming and drying conditions; 2) maintain or increase carbon sequestration by vegetation; and 3) reduce its greenhouse gas emissions associated with burning fossil fuels for energy production, as well as those associated with large, intense, wildfires. By restoring and maintaining forest ecosystems and protecting certain forests from development, harvest or die-off due to insects and/or disease, the Plateau can store carbon, while reducing our contribution to global warming. According to the Chicago Climate Exchange (CCX 2007), rangeland ecosystems in the Rocky Mountain range and forest region are capable of sequestering between 0.12 and 0.28 metric tons of carbon per acre per year for non-degraded and restored rangelands respectively. Using woody biomass for renewable energy and bio-based products we will also contribute to greenhouse gas reduction goals.

Certain vegetation cover types, such as ponderosa pine and pinyon-juniper, will be more adaptive to a warmer, dryer climate, as is predicted for southwest Colorado; however, overly dense stands of all cover types will make forests more vulnerable to fire and then to invasive species, such as cheat grass, post fire. It will also be important to restore and manage forests to increase resiliency from future drought. Through this project, climate change adaptation and mitigation strategies will be integrated into restoration efforts. Adaptive strategies include: 1) resistance options (forestalling impacts and protecting highly valued resources); 2) resilience options (improving the capacity of ecosystems to return to desired conditions after disturbances); and 3) response options (facilitate transition of ecosystems from current to new conditions).

Trails/Transportation. Existing roads will be used for equipment access to the extent location and conditions permit. No permanent roads will be constructed under this project; however, a number of short, temporary road segments will be needed to provide log truck access. Roads and trails identified for decommissioning in the Uncompahgre Travel Plan (FEIS/ROD 2002) will be decommissioned with this project. Proposed decommissioning includes 130 miles of road, which would produce 119 acres of watershed improvements and over 35,000 acres of wildlife habitat improvements. In addition, riparian habitat will be improved by the relocation of 1.5 miles of road and erosion control on 100 miles of trail.

The ecological context is also thoroughly described in the many components and supporting documents of the "Landscape Strategy" section.

"The Plateau's large size lends itself to landscape scale projects and habitat. We support funding such as this going only to areas that are large enough to make a difference for species that require very large areas."
Bill Day, Conservation Chair, Black Canyon Audubon Society

"There is unanimous agreement that active forest management is needed on significant portions of the Plateau to maintain and restore ecosystems, increasing their resiliency to future disturbances. Fuel treatments in coordination with community fire plans could finally come to fruition."
Walt Blackburn, Thunder Mountain Wheelers ATV Club

3. Collaboration

Collaboration has been facilitated by the Public Lands Partnership, UP Project, and Colorado Forest Restoration Institute (CFRI). Future planning projects will be supported by the UP Project, which has a successful history of collaborative landscape management and has developed strong relationships with multiple diverse partners. By supporting the collaboration and treatments of multiple federal and state agencies and private landowners, the UP Project is able to leverage resources from a variety of private and public resources and achieve management goals. Furthermore, this project will benefit from a decade of relationships, trust building, and partnerships that have produced multiple landscape-scale projects that span jurisdictional boundaries.

The UP Project was created in 2000, and includes representatives from the Bureau of Land Management – Uncompahgre and Grand Junction Field Offices (BLM); Colorado Division of Wildlife (CDOW); the U.S. Forest Service GMUG National Forests; Western Area Power Administration (Western); Tri-State Generation and Transmission Assoc; and the Public Lands Partnership (PLP), which represents county commissioners, city administrators and representatives from the timber industry, agricultural producers, environmental groups, recreationists and citizens from five counties (Montrose, Delta, Mesa, San Miguel and Ouray). Uncompahgre/Com, Inc. (Unc/Com), which was incorporated in 2000, serves as the 501(c)(3) nonprofit fiscal agent of the PLP and the UP Project.

The mission of the UP Project is to develop a collaborative approach to improve the ecosystem health of the landscape, using best available science, community input and adaptive management. The UP Project's efforts have earned awards from: 1) Department of Interior's "Four Cs" Award, recognizing model example of consultation, cooperation, communication and conservation; 2) U.S. Forest Service's Excellence in Collaboration Award for meeting goals of the National Fire Plan; 3) Wildlife Society's Award for Professional Achievement in Habitat Management; and 4) U.S. Forest Service Regional Honor – Caring for the Land Stewardship Award for the development of native plant materials.

This proposal builds on the highly successful approach from the Unc Mesas Project as a model for landscape restoration and community-based monitoring. The central goal of the Unc Mesas Project is to promote improvements in diversity and productivity of the native ecosystem of the Uncompahgre Mesas area of the Plateau. Uncompahgre Mesas is a 74,000-acre landscape comprised of NFS lands with a number of private in-holdings. The first phase of this demonstration effort focused on a 17,000-acre portion of this larger landscape. NEPA for the 17,000 acre landscape was completed in a short period of time and there were no appeals and/or litigation. The Uncompahgre Mesas Forest and Demonstration project includes up to 7,000 acres of mechanical forest restoration, with 17,000 – 24,000 hundred cubic feet of biomass byproducts and 12,000-14,000 acres of prescribed burning. The major forest types are ponderosa pine, aspen, mixed conifer and spruce-fir. The project includes the commercial harvesting of spruce-fir to help pay for treatments in ponderosa pine and mixed conifer. A variety of public interest groups, environmental organizations and industry participated in developing landscape goals, collecting pretreatment information and conducting baseline monitoring. Key partners in the project include: GMUG National Forests; CFRI; timber industry; conservation and environmental groups, including Colorado Wild, Western Colorado Congress, Uncompahgre Valley Association, Audubon Society; grazing permittees; private landowners; Colorado Division of Wildlife; US Fish and Wildlife Service; motorized and non-motorized recreation users; Colorado State Forest Service; cultural resource stakeholders; and interested public.

The UP Project has provided coordination and facilitation for the Unc Mesas project. With the help of the CFRI, the project design is based on strong science integration. The need for change was determined by assessing the historical forest composition and structure data (pre-1880) of stands representative of the major vegetation types, using a collaborative learning approach. The results of this data collection were compiled and analyzed by CFRI, which then outlined recommended treatment strategies. The data show that current forest conditions are significantly different than historic structure. Current stands are denser than historic stands. A composition shift from fire resistant species to fire intolerant, shade tolerant species was also observed. This data provided the basis for designing forest management.

The Unc Mesas Project includes “citizen science” monitoring teams, which have developed a protocol involving monitoring of vegetation pre-treatment and post-treatment through consensus. These monitoring teams and their protocol will become the basis for this proposed project’s monitoring efforts. CFRI will conduct an initial assessment with support of forest specialists, research scientists, the GMUG and project collaborators. This assessment will establish vegetation types and mixes involved, the terrain, candidate areas for treatment, and types of treatments considered. With input from multi-party monitoring meetings, CFRI will create a plan that will include measurement protocols to be used for the duration of the monitoring project. Data will be analyzed and reported to the multi-party group to allow it to be used for adaptive management purposes.

Monitoring teams will also include a youth component from the GMUG’s “Community Based Forestry Intern Project,” and other youth programs. The goal of the intern project is to improve students’ and teachers’ understanding of community based monitoring, forestry issues, environmental literacy, and environmental careers through involvement in community based monitoring projects. Youth programs are beneficial to local communities, including the City of Montrose, where over 40% of the students qualify for free and reduced lunch. According to a Montrose Economic Development Council 2006 study, only 12.8% of the population has college bachelor degrees. The NFS can play an important role in exposing youth to environmental careers and professional role models.

In addition, the GMUG will involve the Collbran Civilian Job Corps Center, which provides career technical and academic training to disadvantaged youth ages 16 through 24. Job Corps participants will be involved in monitoring projects. The Collbran Job Corp Center is currently rated #1 with regards to academic accomplishments and placement of youth. The GMUG also works with the Western Colorado Conservation Corps, which is an AmeriCorps program offering a unique opportunity for young adults ages 14 - 25 to work and learn in an outdoor setting. The GMUG has a successful history of including these youth organizations in monitoring and will continue these associations.

The following is a list of partners/participants in this proposed Uncompahgre Plateau Collaborative Restoration Project, many of which will provide additional resources, including cash and in-kind matching contributions: Bureau of Land Management, Colorado Forest Restoration Institute, Colorado State University, Colorado State Forest Service, Uncompahgre Plateau Project, Colorado Division of Wildlife, Public Lands Partnership, Montrose, Delta, Ouray, San Miguel and Mesa counties, Western Area Power Administration, Tri-State Power and Generation Inc, Delta/Montrose Electric Association, Timber Industry (Intermountain Resources, Delta Timber, and West Range Reclamation), Grazing Industry and Lease Holders, Environmental & Conservation Groups (Black Canyon Audubon, Colorado Wild, Western Colorado Congress, Uncompahgre Valley Association, The Nature Conservancy, the New Community Coalition), Recreationists and User Groups (Hunters, Thunder Mountain Wheelers, Uncompahgre Trail Riders, Western Slope 4-Wheelers, COPMOBA), Private Landowners. Youth Educational Groups (Collbran Job Corp, Colorado Western Conservation Core, Montrose High School Students and Teachers), Other Fund Partners (National Forest Foundation, National Fish & Wildlife Foundation, Mule Deer Foundation, Rocky Mountain Elk Foundation, National Wild Turkey Federation, Colorado Division of Wildlife, Habitat Partnership Program).

“In many parts of the country, for example, ‘collaborative forestry’ has meant that citizen groups develop a dialog with federal land managers about common goals for forests. On the UP, the federal agencies are engaged as core participants within the full range of collaboration (not just decision-making outsiders), and the citizens are full partners in key aspects of field work (such as assessing historic forest conditions and participating in multi-party monitoring). The most impressive aspect of the UP collaborations is the use of the ‘nebulous we’; the collaborators are so focused on shared goals and shared experiences that almost anyone in the collaborative can say ‘we did this.’ or ‘we plan to do this’ because there’s such a broad base of joint ‘ownership’ of issues and projects (from agencies to citizens, from industries to conservation groups). The UP Collaborative Restoration Project may provide the best opportunity in the Nation for demonstrating how we can accomplish our common goals for the forests - and communities - of the future.”

Dan Binkley, Professor of Forest Ecology, Colorado State University

4. Wildfire

Current stand density, composition and juxtaposition on the Uncompahgre Plateau result in a landscape that is susceptible to large wildfires that impact several key values, including wildlife habitat, water quality and yield, homes and infrastructure, and recreation and scenery. This proposal seeks to restore many of the key characteristics of native stands that are lacking in today’s forests. Historically, wildfire played a major role in shaping the structure and composition of these forests. As an example, frequent low intensity fires burned in ponderosa pine, reducing the build-up of forest fuels, maintaining relatively open stands by killing (thinning) smaller trees, and creating conditions favorable to the growth of grasses, forbs, and shrubs. The fire regime in the cooler, moister mixed-conifer forests was a less-frequent mixed-severity regime; in some places, fire would creep through mixed-conifer forest, consuming little fuel and killing only small trees, while in other areas torching and killing groups or patches of large trees (see CFRI technical report, <http://upproject.org/publications/pdfs/Unc%20Mesas%20White%20Paper%20082509.pdf>).

Current Wildfire Conditions. During the time period since European settlement, wildfire starts on the Plateau have been actively suppressed. This lull in fire activity has brought about changes to these forests, making them vulnerable to uncharacteristic stand-replacement fire. Without the “thinning” afforded by periodic wildfire, many more seedlings have survived than otherwise would have, and the tree density of these forests has increased considerably. Additionally, there has been a notable species shift in many stands where the once-dominant, fire-tolerant ponderosa pine and aspen is being replaced by more fire-intolerant subalpine fir as well as Engelmann and blue spruces. Finally, the quantity of live and dead vegetation (fuels) has increased in the absence of occasional natural “cleansing” fires, and today represents a high potential for historically uncharacteristic stand-replacement wildfire. The Fire Regime and current Condition Class of some of the major vegetation groups are summarized in the following table:

Vegetation Type	Fire Regime	Condition Class	Acres	Percent of NFS on the Plateau
Ponderosa Pine – Oak	I	2-3	152,700	27%
Mountain Shrub (Oak, Serviceberry, Mtn. Mahogany)	II	1	130,300	23%
Sagebrush	II	3	29,700	5%
Pinyon-Juniper – Oak – Serviceberry	III	2	71,200	12%
Aspen	III	2	52,500	9%
Spruce Fir – Aspen	V	2	118,900	21%
Other types			16,700	3%
Totals			572,000	100%

Approximately 70% of the Uncompahgre Plateau (condition Class 2 and 3 areas) is at moderate risk of disturbance events, including fire that would alter the current vegetation mosaics and increase the risk of permanent physical changes due to direct effects to soils and water as well as the accelerated introduction of invasive species. All major vegetation types (excluding mountain shrub) currently have fire frequencies that have departed from historical frequencies by one or more return interval (refer to literature citations in the *Comprehensive Assessment*, http://www.fs.fed.us/r2/gmug/policy/plan_rev/proposed/index.shtml#CA).

Several cover types are experiencing insect and disease outbreaks. The spruce-fir vegetation type is experiencing heavy insect infestation, increasing the mortality in these stands. This mortality will cause the stands to collapse, creating extremely heavy surface fuels over the next several decades. Annual forest health aerial surveys of the Plateau indicate that as much as 37% of the aspen may be impacted by Sudden Aspen Decline (SAD). The resulting mortality in these stands will also dramatically increase the surface fuel loading over the next several decades. These stands are likely to be replaced by more flammable vegetation types. All of these factors may result in unwanted wildfires and may result in the loss of key ecosystem components.

The ponderosa pine and mixed conifer ecosystems are the primary vegetation type where uncharacteristic wildfire is a concern regarding long term fire effects. Fires that initiate within the untreated stands are likely to

result in undesirable severe crown fires accompanied by high overstory mortality. This type of event has already been witnessed on and adjacent to the Plateau in recent years (Horsefly Fire in 1990 and the Burn Canyon Fire in 2002).

While attempting to reconstruct forest structure, Binkley et al., (2008) found that very little of the ponderosa pine retain the structure common prior to Euro-American settlement in the area. Ponderosa pine forests on the Plateau have increased basal area and have less crown openings to allow meadow. This is consistent with increased fuel loading and tighter crown spacing, which increases the risk of a stand replacement fire. Mixed conifer types historically have a wide range of typical forest conditions. This dampened the effect of Euro-American activities in mixed conifer stands, compared with the effects observed in ponderosa pine stands. However, changes are seen in fuel characteristics on a landscape level due to the rarity of fires in the area (Binkley et al., 2008), as a result of fire exclusion over the last century.

Uncharacteristic fires within pinyon-juniper and mountain shrub vegetation types may have multi-day fires as opposed to the more natural single-day fires and/or they may burn larger than historic fires in these vegetation types. Although this is a divergence from their natural response to fire, the results of such fires are usually acceptable if values are not at risk. This does, however, become a significant concern in the urban interface.

There are 351,987 acres of private inholdings as well as high voltage transmission lines critical to the national and regional electrical grid across the Plateau. With the declining health of the spruce-fir, mixed conifer, and aspen forests, the increase in mature pinyon-juniper stands covering thousands of contiguous acres, cheat grass, and on-going drought on the Plateau, the risk of vegetation caused power interruptions and wildfire risk to private property is certain.

Power interruptions can result from unstable taller vegetation falling into power lines, potentially igniting wildfires. Longer term consequences can also result from a power facility's inability to survive major damage when overcome by large scale wildfire events originating from other causes. Unstable and declining forest health conditions create a serious threat to the reliability of the combined national, regional, and local electrical infrastructure.

Proposed fuels treatments will be focused on creating and maintaining fire resilient stands to enable successful management of wildfires. Fuels treatments and management of unplanned ignitions will be used to return the landscape to a condition that is more amenable to frequent, low to moderate severity fires, and to reduce the risk of wildfire causing the loss of life and property. Wildland Urban Interface (WUI) areas cover approximately 42% of NFS managed lands on the Plateau (233,200 acres). Fuels treatments within the WUI will focus on protecting communities-at-risk, other private lands, power lines and pipelines, electronic transmission sites, guard stations and developed campgrounds, buffered by one mile. Several of the counties have completed (or are nearing completion of) Community Wildfire Protection Plans that are collaboratively integrated into adjacent forest fuels treatment plans.

How Wildfires will be Managed. The GMUG Land Management Plan and the Fire Management Plan identify resource objectives for the management of naturally ignited wildfires on the Plateau. Whenever possible, wildland fires will be used to: 1) reduce hazardous fuels to protect life and property; 2) improve overall forest health and enhance ecosystem function and enhance wildlife habitat, species diversity, and range and watershed conditions; and 3) reduce the potential for large catastrophic fires by helping to return the forest to more historic fuel types and conditions. The proposed treatments will allow the GMUG to more effectively manage fires, even near some urban interface areas, so that fire is able to perform as a natural ecosystem component. The management of fire to achieve desired conditions while protecting values at risk has the potential to reduce wildfire suppression and post fire rehabilitation treatment costs. The cost of managing wildfires on the Plateau when modeled with Wildland Fire Decision Support System varied greatly from \$125 to over \$1,000/acre. As a result of proposed restoration treatments, long term management costs for prescribed burning and follow-up mechanical treatments are expected to be significantly reduced to \$20 - \$100/acre.

5. Utilization

The Uncompahgre Plateau offers an excellent opportunity to integrate environmental, social and economic goals through biomass extraction. Currently, the majority of the noncommercial woody biomass on the Plateau is not being utilized. These materials are routinely either gathered into slash piles and burned or cut up and scattered on the ground. There is a need for this material to be utilized for renewable energy and/or other products. This utilization will help to offset the cost of forest management efforts, while supporting existing forest product industry and assisting potential new industry.

This project will implement economically sustainable and environmentally sound treatment strategies, which will help preserve the local forest product industry, benefiting the local economy and future forest restoration efforts. The proposed projects provide almost \$2 million in forest product value, including 150,000 CCF of biomass valued at \$52,000 and 140,000 CCF of sawlog volume, valued at approximately \$140,000. Biomass product will include small diameter wood, predominantly small diameter ponderosa pine, as well as large material with defects (cull material). Some cover types on the Plateau, particularly mixed-conifer, and aspen have a disproportionate share of dead or defective wood due to spruce budworm or Sudden Aspen Decline.

Recognizing the potential for a long-term biomass supply from the Plateau, a collaborative workgroup has been meeting for the past year to identify the uses and markets for biomass. Workgroup participants include: the GMUG National Forests, Bureau of Land Management – Uncompahgre Field Office, Colorado Division of Wildlife, Colorado State Forest Service, Conservation Groups, Utility and Energy Company Representatives, county representatives, representatives from the forest product industry, Colorado Forest Restoration Institute, and the UP Project. The GMUG, along with participants from the biomass workgroup, were recently selected for a \$250,000 grant from the Rocky Mountain Research Station to complete a biomass assessment, which will inform investments in new bioenergy infrastructure, as well as quantify climate change mitigation potential of biomass utilization on the Plateau. The objectives of this study include: 1) quantify the landscape-level stocks, current biomass flows, and the potential biomass flows that are available from the Plateau under alternative treatment scenarios; 2) quantify the costs of delivering biomass feedstock from the Plateau to both existing and potential new energy producers in the region; 3) quantify the net greenhouse gas emissions, carbon balance and energy balance associated with alternative configurations of biomass utilization; and 4) determine the conditions under which the utilization of biomass from the Plateau treatments delivers the greatest net economic and environmental value.

There is great potential for including woody biomass utilization in forest management where profit from timber harvest can offset the costs of removing and processing the biomass. The GMUG has identified regional timber and biomass partners to help leverage human and fiscal resources. The continued viability of the local mill operations is important to the regional economy as well as to the National Forests' ability to utilize woody biomass and accomplish landscape scale treatment.

Delta Timber and Intermountain Resources have made capital investments to enhance efficiency, diversify product lines, retain/add employees, and increase capacity to process wood products generated from forest health and hazardous fuels reduction projects. Intermountain Resources, the largest timber mill in the State, employs about 100 people and has increased its production from processing 30 million board feet per year to one that can handle 42 million board feet annually. The mills are looking at reducing operating costs through the purchase of additional equipment and a small combined heat and power generation facility that would utilize additional biomass in the production of green energy. Many of their byproducts are already used by other local businesses, such as Southwest Soils, Inc.

The timber industry plays a vital role in accomplishing forest treatments, wood utilization, and wildfire mitigation. Commercial harvest is the most economical means to achieve treatment objectives. Being able to guarantee a large supply of woody biomass for the long term will create a more sustainable market for biomass, which can help reduce the cost of restoration, site preparation, and reforestation activities, thereby allowing

more acres to be treated. The Uncompahgre Plateau has already been identified as having a large and continuous supply of biomass, and any investments in local infrastructure will have a long-term benefit.

In addition, multiple woody biomass-to-energy and other renewable energy options have been collaboratively discussed in the communities surrounding the Plateau. Many of these communities are in the operating area of Tri-State Generation and Transmission Association (“Tri-State”). One project currently being considered is to co-fire the coal fired Nucla Power Plant, which is within the Project area, with 20% woody biomass. Renewable energy projects, such as this, would provide long-term contracts for forest product companies and dovetail with the Plateau’s substantial long-term source for biomass.

“We have an existing wood products industry that needs support and we intend to help grow an emerging biomass industry in our area. Tri-State Generation and Transmission, Inc. recognizes this opportunity and is currently working on assessing a co-gen firing process at its Nucla power plant.”

Ron Henderson, Chair, Montrose County Board of County Commissioners.

“This project would bring many benefits to communities while creating a healthier forest on the Uncompahgre. It should provide a logical and excellent source of woody biomass that could be used locally in a variety of ways, including alternative energy generation. It would help protect transmission and distribution lines from catastrophic fire, and help stabilize logging and milling operations in our service territory – skilled loggers and viable mills upon which forests throughout the State depend.”

Dan McClendon, General Manager, Delta Montrose Electric Association

6. Investments

Within the Uncompahgre Plateau landscape, the Rocky Mountain Region and the GMUG are committed to continuing to invest funds, personnel, and other resources and would accelerate the restoration above historical levels if CFLRP funds are provided. The project would use nearly \$ four million of allocated funds and \$200,000 of permanent and trust funds over 10 years.

The GMUG is also committed to increasing its involvement in collaborative efforts and capacity. The GMUG has been a long-term primary partner in the UP Project and the Unc Mesas Collaborative Landscape Restoration Project. Proposed projects will increase collaborative planning, implementation, and monitoring efforts. Through years of experience, the GMUG is aware of the increased time and resources that collaborative efforts require; however, this expense is paid back ten-fold by positive relationships gained and the decrease in appeals and community conflicts over Forest Service proposed actions. As a result of collaborative efforts, costs will continue to decrease as dividends are paid from our increased ability to operate at a larger scale. Since 2003, the GMUG, UP Project partners, and grant funders have invested almost \$2 million in UP projects and programs. The GMUG has also been involved in a collaborative biomass workgroup and has committed resources to a biomass supply assessment, for which it was the recipient of a \$160,000 Rocky Mountain Research Station grant, with a project value of over \$250,000. This new study will examine the economics of utilization and new infrastructure investments within the existing wood products industry network. It will also examine potential climate change mitigation and adaptation benefits from capturing biomass from treatments.

The GMUG is also committed to funding its Community Based Forestry Intern Project, a summer monitoring crew made up of Montrose High School students and teachers, as well as working with the Collbran Civilian Job Corps Training Center, and the Western Colorado Conservation Corps. This investment not only provides jobs and job training for local youth and young adults, it also increases the GMUG's capacity to monitor.

The GMUG, as well as other Uncompahgre Plateau Native Plant Program partners, have invested in providing regionally-adapted native plant materials for the Colorado Plateau. This partnership includes the U.S. Forest Service Regions 2 and 4, BLM – Dolores and Uncompahgre Field Offices, the Colorado Plateau Native Plant Initiative, Utah Division of Wildlife Resources, Colorado Division of Wildlife (CDOW), Colorado State University, the Upper Colorado Environmental Plant Center, commercial seed companies and growers, energy companies, and the UP Project. The total investment from partners since the inception of the Native Plant Program in 2003 through March 2010 is approximately \$2,010,000, of which 90% has been from federal partners. Currently, the CDOW is investing up to \$1.2 million in a much-needed seed storage facility proposed to be located within the project area.

The two large timber mills in the region, as well as small timber and renewable energy businesses, are all investing in infrastructure and capacity to economically support a biomass market. Intermountain Resources (IMR), which is the largest timber mill in a five state area, and Delta Timber have both invested in infrastructure and feasibility studies to increase their ability to handle increased timber harvests and biomass products. Both of these companies received American Recovery and Reinvestment Act (ARRA) stimulus funding to help develop their infrastructure and efficiency, as well as retain and hire new employees, providing over 70 jobs. When Colorado's forestry needs shifted to restoration and fuel reduction, IMR invested in adding a "sharp chain", small diameter line of products that focus specifically on the production of 2x4 and 2x6 studs. This investment allows the mill to increase their processing time, increasing efficiency to within the top 15% of mills in the U.S. Both mills have negotiated new contracts for wood byproduct sales, some of which will double the price received for these products in 2008. They are also pursuing such biomass opportunities as a combined heat and power cogeneration facility at the mill and a "fuels-for-schools" project. IMR has already added a biomass sales position to investigate new markets and value adding capabilities (bagging and specialty markets). Its change from using a butane boiler to a woody biomass boiler, which will use the least marketable biomass, to provide the heat for running its dry kilns will save IMR between \$600,000 and \$800,000 (depending on the wood species dried).

Tri-State Generation and Transmission Association and the Montrose Timber Consortium (initially comprised of Intermountain Resources and Delta Timber and their subcontractors) have signed a letter of intent to complete 1) a biomass supply assessment and 2) a feasibility analysis of co-firing biomass and coal at the Nucla Power Plant. A more formal agreement, anticipated in the near future, would increase the visibility renewable energy initiatives on the Western Slope of Colorado, and elevate the Nucla project to a more prominent position both within the biomass-to-energy assessments currently taking place within the U.S. Forest Service and the State of Colorado. Such investment by Tri-State, retrofitting the power plant to use co-firing biomass, would potentially be a \$10 million investment, but would provide a local, long-term market for biomass.

In addition, Tri-State and Western Area Power Administration (Western) have invested heavily in treatments along power line corridors. Both organization have been active partners in the UP Project and have worked with land managers to protect power lines in a manner that benefit forest health and wildlife habitat. Federally and locally owned critical electrical transmission lines and infrastructure cross the Plateau, with 382 miles of high voltage transmission lines and 104 miles of primary local power lines. This project includes two fuels treatments along power line corridors, for which, prior to this fiscal year, Tri-State contributed \$275,000 and Western contributed \$30,000 for planning and \$75,000 for treatment.

Numerous funding partners have invested in UP Project, including the National Forest Foundation, National Fish and Wildlife Federation, the Rocky Mountain Elk Foundation, Colorado Division of Wildlife, county governments, the Mule Deer Foundation, the National Wild Turkey Federation, the Safari Club, Audubon Society, and oil and gas companies. The UP Project will continue to bring in additional resources, grants and partners for Plateau projects, educational programs, research studies and collaborative efforts to benefit the Plateau and its surrounding communities.

Jobs Created. The rural, western Colorado communities surrounding the Plateau are dependent on publicly managed lands and the recreation, hunting, grazing and resource extraction that these lands support and that create jobs. Maintaining a healthy ecosystem on the Plateau will support these public land-dependent activities and jobs. The communities surrounding the Plateau have suffered from the economic downturn, the decline in oil and gas jobs, and unemployment rates are above the state average of 8.4 percent. According to a March 2010 Colorado Department of Labor and Employment report, Delta County's unemployment rate was 9.6%, Mesa County's was 10.3% and Montrose County's was 11.2%. These rates are all among the highest unemployment rates in the state, with Montrose County ranked sixth highest.

The increase in wood byproducts from proposed projects will provide the opportunity for new industry and/or biomass businesses to develop and will sustain -and likely increase - the current employment at the larger timber companies of Intermountain Resources and Delta Timber. Proposed restoration projects are estimated to provide approximately 750 FTE jobs for stewardship contracts, monitoring crews, field crews, contract biologists, archeologists, and various other seasonal employees. The GMUG hires youth from the local high schools, the Collbran Civilian Job Corp Center and Colorado Western Conservation as field crews and will be able to increase its involvement with these organizations. The GMUG also works with Colorado State University and Mesa State College, and has often hired graduate or college students for field work and/or research projects, approximately two per summer.

“In the past 25 years the American West has grown a lot smaller. The increased pressure on public lands from a wide variety of interest groups has evolved into perpetual conflict between different agenda competing for limited resources. The UP Project effort represents a shining star in the horizon, wherein a solution is found through a collaborative process of first understanding and then finding common interests, which develop into synergistic action, benefiting all agendas. This approach is innovative, effective and simply terrific.”

Ron Turley, Western Area Power Administration

7. Funding Estimate

Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in FY 2010 to match funding from the Collaborative Forested Landscape Restoration Fund	
Fiscal Year 2010 Funding Type	Dollars/Value Planned
FY 2010 Funding for Implementation	345,600
FY 2010 Funding for Monitoring	100,400
1. USFS Appropriated Funds	304,200
2. USFS Permanent & Trust Funds	10,000
3. Partnership Funds	514,500
4. Partnership In-Kind Services Value	60,500
5. Estimated Forest Product Value	107,400
6. Other (specify)	0
FY 2010 Total (total of 1-6 above for matching CFLRP request)	996,600
FY 2010 CFLRP request (must be equal to or less than above total)	446,000
Funding off NFS lands associated with proposal in FY 2010 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund)	
Fiscal Year 2010 Funding Type	Dollars Planned
USDI BLM Funds	0
USDI (other) Funds	0
Other Public Funding	0
Private Funding	0

Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in FY 2011 to match funding from the Collaborative Forested Landscape Restoration Fund	
Fiscal Year 2011 Funding Type	Dollars/Value Planned
FY 2011 Funding for Implementation	926,800
FY 2011 Funding for Monitoring	143,300
1. USFS Appropriated Funds	547,100
2. USFS Permanent & Trust Funds	20,000
3. Partnership Funds	462,000
4. Partnership In-Kind Services Value	45,000
5. Estimated Forest Product Value	212,700
6. Other (specify)	0
FY 2011 Total (total of 1-6 above for matching CFLRP request)	1,286,800
FY 2011 CFLRP request (must be equal to or less than above total)	1,070,200
Funding off NFS lands associated with proposal in FY 2010 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund)	
Fiscal Year 2011 Funding Type	Dollars Planned
USDI BLM Funds	0
USDI (other) Funds	0
Other Public Funding	0
Private Funding	0

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Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in FY 2012 to match funding from the Collaborative Forested Landscape Restoration Fund	
Fiscal Year 2012 Funding Type	Dollars/Value Planned
FY 2012 Funding for Implementation	853,600
FY 2012 Funding for Monitoring	164,600
1. USFS Appropriated Funds	801,800
2. USFS Permanent & Trust Funds	22,700
3. Partnership Funds	405,400
4. Partnership In-Kind Services Value	24,900
5. Estimated Forest Product Value	459,600
6. Other (specify)	0
FY 2012 Total (total of 1-6 above for matching CFLRP request)	1,714,500
FY 2012 CFLRP request (must be equal to or less than above total)	1,018,200
Funding off NFS lands associated with proposal in FY 2010 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund)	
Fiscal Year 2012 Funding Type	Dollars Planned
USDI BLM Funds	0
USDI (other) Funds	0
Other Public Funding	0
Private Funding	0

Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in FY 2013 to match funding from the Collaborative Forested Landscape Restoration Fund	
Fiscal Year 2013 Funding Type	Dollars/Value Planned
FY 2013 Funding for Implementation	845,900
FY 2013 Funding for Monitoring	107,400
1. USFS Appropriated Funds	459,600
2. USFS Permanent & Trust Funds	15,400
3. Partnership Funds	408,000
4. Partnership In-Kind Services Value	34,300
5. Estimated Forest Product Value	434,300
6. Other (specify)	0
FY 2013 Total (total of 1-6 above for matching CFLRP request)	1,351,600
FY 2013 CFLRP request (must be equal to or less than above total)	953,300
Funding off NFS lands associated with proposal in FY 2010 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund)	
Fiscal Year 2013 Funding Type	Dollars Planned
USDI BLM Funds	0
USDI (other) Funds	0
Other Public Funding	0
Private Funding	0

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Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in FY 2014 to match funding from the Collaborative Forested Landscape Restoration Fund	
Fiscal Year 2014 Funding Type	Dollars/Value Planned
FY 2014 Funding for Implementation	838,600
FY 2014 Funding for Monitoring	133,400
1. USFS Appropriated Funds	436,800
2. USFS Permanent & Trust Funds	18,100
3. Partnership Funds	366,800
4. Partnership In-Kind Services Value	34,700
5. Estimated Forest Product Value	410,300
6. Other (specify)	0
FY 2014 Total (total of 1-6 above for matching CFLRP request)	1,266,800
FY 2014 CFLRP request (must be equal to or less than above total)	972,000
Funding off NFS lands associated with proposal in FY 2010 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund)	
Fiscal Year 2014 Funding Type	Dollars Planned
USDI BLM Funds	0
USDI (other) Funds	0
Other Public Funding	0
Private Funding	0

Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in FY 2015 to match funding from the Collaborative Forested Landscape Restoration Fund	
Fiscal Year 2015 Funding Type	Dollars/Value Planned
FY 2015 Funding for Implementation	1,019,300
FY 2015 Funding for Monitoring	115,000
1. USFS Appropriated Funds	343,700
2. USFS Permanent & Trust Funds	18,300
3. Partnership Funds	300,700
4. Partnership In-Kind Services Value	65,200
5. Estimated Forest Product Value	93,700
6. Other (specify)	0
FY 2015 Total (total of 1-6 above for matching CFLRP request)	821,600
FY 2015 CFLRP request (must be equal to or less than above total)	1,134,400
Funding off NFS lands associated with proposal in FY 2010 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund)	
Fiscal Year 2015 Funding Type	Dollars Planned
USDI BLM Funds	0
USDI (other) Funds	0
Other Public Funding	0
Private Funding	0

Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in FY 2016 to match funding from the Collaborative Forested Landscape Restoration Fund	
Fiscal Year 2016 Funding Type	Dollars/Value Planned
FY 2016 Funding for Implementation	791,000
FY 2016 Funding for Monitoring	102,500
1. USFS Appropriated Funds	263,300
2. USFS Permanent & Trust Funds	16,100
3. Partnership Funds	197,200
4. Partnership In-Kind Services Value	23,700
5. Estimated Forest Product Value	99,100
6. Other (specify)	0
FY 2016 Total (total of 1-6 above for matching CFLRP request)	599,400
FY 2016 CFLRP request (must be equal to or less than above total)	893,500
Funding off NFS lands associated with proposal in FY 2010 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund)	
Fiscal Year 2016 Funding Type	Dollars Planned
USDI BLM Funds	0
USDI (other) Funds	0
Other Public Funding	0
Private Funding	0

Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in FY 2017 to match funding from the Collaborative Forested Landscape Restoration Fund	
Fiscal Year 2017 Funding Type	Dollars/Value Planned
FY 2017 Funding for Implementation	664,500
FY 2017 Funding for Monitoring	80,800
1. USFS Appropriated Funds	294,100
2. USFS Permanent & Trust Funds	16,300
3. Partnership Funds	198,400
4. Partnership In-Kind Services Value	24,200
5. Estimated Forest Product Value	0
6. Other (specify)	0
FY 2017 Total (total of 1-6 above for matching CFLRP request)	533,000
FY 2017 CFLRP request (must be equal to or less than above total)	745,300
Funding off NFS lands associated with proposal in FY 2010 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund)	
Fiscal Year 2017 Funding Type	Dollars Planned
USDI BLM Funds	0
USDI (other) Funds	0
Other Public Funding	0
Private Funding	0

Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in FY 2018 to match funding from the Collaborative Forested Landscape Restoration Fund	
Fiscal Year 2018 Funding Type	Dollars/Value Planned
FY 2018 Funding for Implementation	611,600
FY 2018 Funding for Monitoring	80,700
1. USFS Appropriated Funds	254,400
2. USFS Permanent & Trust Funds	16,600
3. Partnership Funds	199,600
4. Partnership In-Kind Services Value	24,700
5. Estimated Forest Product Value	0
6. Other (specify)	0
FY 2018 Total (total of 1-6 above for matching CFLRP request)	495,200
FY 2018 CFLRP request (must be equal to or less than above total)	692,300
Funding off NFS lands associated with proposal in FY 2010 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund)	
Fiscal Year 2018 Funding Type	Dollars Planned
USDI BLM Funds	0
USDI (other) Funds	0
Other Public Funding	0
Private Funding	0

Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in FY 2019 to match funding from the Collaborative Forested Landscape Restoration Fund	
Fiscal Year 2019 Funding Type	Dollars/Value Planned
FY 2019 Funding for Implementation	505,500
FY 2019 Funding for Monitoring	58,200
1. USFS Appropriated Funds	190,900
2. USFS Permanent & Trust Funds	16,900
3. Partnership Funds	200,900
4. Partnership In-Kind Services Value	25,200
5. Estimated Forest Product Value	0
6. Other (specify)	0
FY 2019 Total (total of 1-6 above for matching CFLRP request)	433,800
FY 2019 CFLRP request (must be equal to or less than above total)	563,700
Funding off NFS lands associated with proposal in FY 2010 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund)	
Fiscal Year 2019 Funding Type	Dollars Planned
USDI BLM Funds	0
USDI (other) Funds	0
Other Public Funding	0
Private Funding	0

Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in all fiscal years to match funding from the Collaborative Forested Landscape Restoration Fund	
All Fiscal Years 2010-2019 Funding Type	Dollars/Value Planned
FY 2010-19 Funding for Implementation	7,502,500
FY 2010-19 Funding for Monitoring	1,086,400
1. USFS Appropriated Funds	3,896,000
2. USFS Permanent & Trust Funds	170,400
3. Partnership Funds	3,253,400
4. Partnership In-Kind Services Value	362,300
5. Estimated Forest Product Value	1,817,100
6. Other (specify)	0
FY 2010-19 Total (total of 1-6 above for matching CFLRP request)	9,499,300
FY 2010-19 CFLRP request (must be equal to or less than above total)	8,588,900
Funding off NFS lands associated with proposal in FY 2010 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund)	
Fiscal Year 2010-19 Funding Type	Dollars Planned
USDI BLM Funds	0
USDI (other) Funds	0
Other Public Funding	0
Private Funding	0

8. Funding Plan

This proposal requests \$8,588,900 in CFLRP grant funds and commits \$9,499,300 in matching funds over ten years, a 110% match. Matching funds include a commitment of \$3,896,000 from U.S. Forest Service appropriated funds and \$170,400 from Forest Service Permanent and Trust Funds. This funding commitment is an increase over historic levels. This amount has been reviewed by the Regional Forester, and he has committed to providing this level of matching funds. In addition, because of the GMUG's history of working collaboratively with partners and its involvement with the UP Project, it is able to bring \$3,253,400 in partnership funds to this project, along with \$362,300 in partnership in-kind value. Finally, \$1,817,100 in estimated forest product value will help offset treatment costs.

The GMUG also commits to instituting multi-party monitoring for 15 years following project implementation. As the GMUG has already made a considerable investment in the Plateau, and through this project would provide considerable more investments, it will protect these investments through continued monitoring and restoration treatments as necessary.

Furthermore, the GMUG commits to use CFLRP funds allocated in fiscal years 2010 and 2011 on ecological restoration treatments the same fiscal year that the funds are transferred. The GMUG has 86,700 acres of NEPA-ready proposed projects, including all proposed 2010 and 2011 projects.

“It has been a long time since any of us remember the GMUG being awarded a significant allotment of additional funds that would enable the implementation of a project with so many benefits – benefits which include retaining existing jobs and creating new ones in the wood products industry.”

Eric Sorenson, Delta Timber

9. USDI Funding

This proposal does not include actions under the jurisdiction of the Secretary of the Interior.

10. Other Funding

This proposal does not include other private landowner actions.

11. Maps

Vicinity and Proposed Actions maps are attached and can also be viewed from the following links:

1) Uncompahgre Plateau CFLRP Vicinity Map:

http://www.fs.fed.us/r2/gmug/policy/restoration/UPCR/gmug_vicinity.pdf

2) Proposed Treatments Map: <http://www.fs.fed.us/r2/gmug/policy/restoration/UPCR/UPGACFLRP.pdf>

In addition, links for resources and values at risk maps are provided in the Landscape Strategy Section.

12. Landscape Strategy

The 10-year strategy for restoration on the Uncompahgre Plateau is based on a compilation of landscape assessments, planning, and collaborative efforts, at a variety of scales, conducted over nearly a decade. This hierarchy of work has led to an understanding of historic range of variation, current ecological conditions and trends, and development of desired conditions, objectives, management actions, and monitoring activities to maintain or restore ecosystem values and services. The following links provide map representations of the proposed project area, treatments and ecological and resource values:

1) Uncompahgre Plateau CFLRP Vicinity Map:

http://www.fs.fed.us/r2/gmug/policy/restoration/UPCRP/gmug_vicinity.pdf

2) Proposed Treatments Map: <http://www.fs.fed.us/r2/gmug/policy/restoration/UPCRP/UPGACFLRP.pdf>

3) Ownership Map: <http://www.fs.fed.us/r2/gmug/policy/restoration/UPCRP/UPGACFLRPowner.pdf>

4) Cover Types Map: <http://www.fs.fed.us/r2/gmug/policy/restoration/UPCRP/UPGACFLRPcover.pdf>

5) Streams and Riparian Map:

<http://www.fs.fed.us/r2/gmug/policy/restoration/UPCRP/UPGACFLRPstreams.pdf>

6) Cumulative Insect and Disease Map:

<http://www.fs.fed.us/r2/gmug/policy/restoration/UPCRP/UPGACFLRPinsects.pdf>

7) Wildland Urban Interface Map:

<http://www.fs.fed.us/r2/gmug/policy/restoration/UPCRP/UPGACFLRPwui.pdf>

8) Gunnison Sage-grouse Map:

<http://www.fs.fed.us/r2/gmug/policy/restoration/UPCRP/UPGACFLRPgusg.pdf>

9) Bighorn Sheep Habitat Map:

<http://www.fs.fed.us/r2/gmug/policy/restoration/UPCRP/UPGACFLRPsheep.pdf>

10) Cutthroat Trout Habitat Map:

<http://www.fs.fed.us/r2/gmug/policy/restoration/UPCRP/UPGACFLRPcrt.pdf>

The long-term strategy begins with the Memorandum of Understanding between the major partners in the Uncompahgre Plateau Project. This MOU was developed for the purpose of clarifying the intent of partners (the USDA Forest Service, Grand Mesa, Uncompahgre and Gunnison National Forests, the Colorado BLM, Uncompahgre and Grand Junction Field Offices; the Colorado Division of Wildlife; Western Area Power Administration, an agency of the Department of Energy; Tri-State Generation and Transmission Association, Inc., an electric cooperative; and the Public Lands Partnership) to coordinate on the restoration and sustainability of the ecological, social, cultural and economic values of the Uncompahgre Plateau.

The Uncompahgre Plateau area, located in southwest Colorado, comprises over 1.4 million acres of private, state and federal lands. This Uncompahgre Plateau Project (UP Project), composed of the parties above, functions in a collaborative approach among the partners, community and interested stakeholders with the overarching goal to improve the ecosystem health and natural functions of the landscape through active restoration projects backed by best science, community input and adaptive management. The MOU authorized that an Executive Committee and a Technical Committee be established with representation from each of the original four partners to the MOU. The MOU was originally signed in 2001 and was reauthorized and expanded to include additional partners in 2006. http://upproject.org/publications/pdfs/up_mou2006.pdf

At the beginning of the UP Partnership, a strategic plan was developed which outlined the role of Partnership, the collaborative approach to be applied for community involvement, existing science and information, research and projects under development, critical information gaps, tools and methods, anticipated products, integrated ecosystem restoration project selection, funding and implementation criteria, and budget and scheduling. <http://upproject.org/publications/upplan.htm>

The comprehensive assessments and evaluations form the analytical foundation on which finer scale landscape analyses and project plan are built. The assessments discuss conditions and trends for the social, economic, and ecological elements of the forest management environment.

http://www.fs.fed.us/r2/gmug/policy/plan_rev/proposed/index.shtml#CA

The development of the comprehensive assessments utilized an extensive public involvement/collaboration process, including eighteen “landscape working group” meetings for the Uncompahgre Plateau geographic area. Results from the technical analyses were used in the public participation process to inform, focus, and enhance stakeholder discussions.

http://www.fs.fed.us/r2/gmug/policy/plan_rev/proposed/Plan_4_web/Appendix_B_Public_Involvement.pdf

Some key findings of the comprehensive assessment for the Uncompahgre Plateau include:

- The lack of fire disturbance that has resulted from approximately 100 years of fire suppression efforts is reflected in current vegetation conditions. Seventy-one percent of the forest and woodland cover types have dense canopy closures (> 40 percent canopy closure). There are very little early seral conditions in any cover type on the Uncompahgre Plateau. This imbalance is most pronounced in cover types that had a history of more frequent fires, such as ponderosa pine, oak-serviceberry and pinyon-juniper-oak-serviceberry types.
- Aspen stands become very susceptible to cankers and root rots above the age of 110 years. A large percentage of the aspen cover type on the Uncompahgre Plateau is between the age of 80 and 120 years. An increasing amount of mortality caused by these agents is expected in the future. This prediction has manifested with the ubiquitous spread of sudden aspen decline (SAD) across the Plateau.
- Over 60 percent of the aspen stands on the Uncompahgre Plateau include conifer species in the understory or as codominant species (Smith and Smith, 2004). In the absence of some disturbance, these stands will eventually succeed to conifer dominated cover types. A shift from an aspen cover type to various conifer cover types will change the types of habitat available on the Uncompahgre Plateau.
- Fire suppression and grazing over the past 100 years interrupted the natural fire regime in ponderosa pine. The result has been an increase in understory vegetation. Current conditions increase the potential for high-intensity stand replacing fires when fire does occur in this type. Before fire can be reintroduced into many of these stands, the amount of vegetation may need to be reduced by some means other than fire.
- Current stand conditions (age, density, canopy structure) in the majority of the spruce-fir cover type are susceptible to outbreaks of various insects and pathogens. Outbreaks of western spruce budworm and subalpine fir decline have been increasing over the past decade. (See Forest Health section.)
- Approximately 52 percent of spruce-fir cover type is in late-mid to late seral stages that are ripe for fire and insect and pathogen outbreaks. Because so much of the landscape is in the same condition, there is a high probability that large areas can be affected at the same time. Management activities that increase diversity in age, size and seral condition, could be used to reduce the potential effects of natural disturbances.
- A comparison of conditions between 1937 and 1994 (Manier et al. 2003) indicates that pinyon-juniper has expanded into areas formerly dominated by shrubland and grasslands only in localized areas; however, the density of pinyon-juniper stands has increased. These changes have caused a decrease in the amount of available forage for both wildlife and domestic livestock.
- The proximity of wildland-urban interface areas intensifies the risks associated with intense wildfires in the pinyon-juniper cover type. Increasing development on private lands within this cover type is increasing the risks.

The evaluations summarize key findings from the assessments, identify the gap between current and desired conditions, discuss management implications, and suggest changes in strategic guidance or management actions

to achieve or maintain desired conditions. The evaluations are presented in a single document entitled the “Comprehensive Evaluation Report (CER).”

http://www.fs.fed.us/r2/gmug/policy/plan_rev/proposed/index.shtml#CER

Some key relevant findings of the comprehensive evaluation for the Uncompahgre Plateau include:

- The mix of tree species, stand structure (density, multiple layers, extent of contiguous area in susceptible condition, etc.), and weather conditions, especially drought, will determine the level of tree mortality that may occur at the landscape level. Relatively uniform stand conditions inherently vulnerable to insect/disease attack dominate the majority of the forested landscape. These conditions make the landscape susceptible to large-scale insect and disease disturbances. For forests to be less susceptible to insect and disease infestations, they need to be diverse in age, size, density, and species composition.
- Historically, the pinyon-juniper cover type had a patchy distribution of different aged stands. Currently, most of the pinyon-juniper on the Uncompahgre Plateau is in late seral conditions of continuous dense even-aged stands. These conditions will alter the effects of future natural disturbances on the landscape. There is an increased risk of stand-replacing crown fires that may burn larger areas.
- Denser and more uniform structural conditions in many habitat types have resulted in reduced habitat for species that require a variety of structural stages within close proximity of each other.
- The number of invasive, exotic species and the sizes of their populations have grown markedly, as has their influence on many ecosystems across the Forest. Effects on native species and populations are apparently increasing, yet exact effects are in many cases unknown.
- Vegetation and fuels conditions have caused recent fires to burn with higher intensities over areas larger than indicated by the historic record. If this trend continues, there is very high potential for invasive species to become established following disturbance.
- Proactive vegetation and fuels management activities designed to reduce risk/susceptibility to insects and disease should be applied in areas available (not roadless or otherwise limited to passive management where natural processes such as insect and disease mortality would be allowed to proceed without human influence).

The assessments and evaluations integrated rigorous science with research and modeling conducted specific to geographic areas. The adopted strategic framework calls for analysis the findings and recommendations from the comprehensive assessments and evaluation to be used in finer-scale analyses on smaller landscapes within the geographic area. These efforts have included and will include more detailed landscape assessments to drive project NEPA. Three examples of this tiered strategy are discussed below, including the Spring Creek/Dry Creek Vegetation Management Strategy, Ironhorse Vegetation Management strategy, and the Unc Mesas Forest Restoration and Demonstration Project.

The Spring Creek/Dry Creek Vegetation Management Strategy was the first of several watershed strategies intended within the UP Geographic Area. <http://upproject.org/publications/scdc.htm>

The integrated analysis of this 256,000 acre watershed produced proposed vegetation, fuels, and other resource restoration and maintenance activities that were then taken into the NEPA process. The development and use of an ecological “mosaic driver” approach provided for designing treatments to better address resource values and needs at a site-specific landscape scale, more detailed than the geographic area. Ultimately, several thousand acres of restoration treatments on National Forest and BLM lands made it through NEPA and were implemented.

Another landscape analysis that has yielded NEPA-ready projects is the Ironhorse Vegetation Strategy. This analysis area includes a 65,000 acre landscape of ponderosa pine, pine-oak, aspen, pinyon-juniper woodland, and sagebrush rangeland located at the southern tip of the Uncompahgre Plateau.

http://upproject.org/publications/pdfs/ironhorse_i.pdf

Assessment findings, combined with mosaic-driver analysis, led to prioritized treatment objectives that were taken into the NEPA process, which approved thousand acres of restoration treatments in the Ironhorse Landscape conducted in 2009.

The “Uncompahgre Mesas Forest Restoration and Demonstration Project” is the most recent landscape analysis and NEPA effort within the Uncompahgre Plateau Geographic Area. This project has been another pioneering effort that has yielded new models of collaboration in project development, science integration, and multiparty monitoring approach. <http://upproject.org/publications/pdfs/Unc%20Mesas%20White%20Paper%20082509.pdf>

With the help of the Colorado Forest Restoration Institute –Colorado State University, historical forest composition and structure data (pre-1880) were collected by workgroup members in areas representative of the major vegetation types within the project area. This research provided a starting point for designing forest management and restoration treatments that encourage healthy forested landscapes that are resilient to change while contributing to the human communities that benefit from the forests’ production of water, timber, forage, wildlife, recreation, and beauty. <http://upproject.org/publications/pdfs/UPP25MesaFinal.pdf>

The 2009 NEPA effort approved commercial timber harvest and mechanical treatments will take place on about 6,000 - 8,000 acres within ponderosa pine, aspen, mixed conifer and spruce-fir forest types, producing an estimated 17,000-24,000 hundred cubic feet of commercial timber and generating \$0.6 million.

A large NEPA analysis was done for the North Uncompahgre Plateau in 2004 for wildlife habitat improvements covering 13,000 acres of treatments in pinyon-juniper and Gambel’s oak. To date, approximately 850 acres have been treated with mechanical treatments (roller-chopping and hydroaxe).

The last referenced component of the Landscape Strategy is the GMUG Fire Use Forest Plan Amendment (January 2007) which enables the use of wildfire to accomplish or maintain restored ecological conditions. The wildfire use tool has already facilitated thousands of acres resource benefits on the Uncompahgre Plateau. Implementation of the projects in this proposal will significantly further the potential to use wildfire to restore or maintain ecosystem resiliency, as well as to reduce future wildfire suppression costs.

http://www.fs.fed.us/r2/gmug/policy/fire_use/FINALDNFONSIFireUse.pdf

The overall landscape strategy for the Uncompahgre Plateau Geographic Area is one of continuing to apply, adapt, and expand collaboration, science integration, and project development approaches that have proven effective over the past ten years of partnership in restoration activity. This strategy has yielded thousands of acres of restoration treatments implemented on the ground, additional thousands of acres of NEPA-approved projects that are awaiting funding, reduced conflict and contention over land management proposals, increased collaborative capacity and social license to continue restoration planning and implementation at broader, more effective and efficient scales. Over the next decade, natural or human-caused disturbances could substantially alter conditions on the ground, necessitating changes in the parameters, scope, or priority of these projects.