

Burney-Hat Creek Basins Project

A COLLABORATIVE FOREST LANDSCAPE RESTORATION PROGRAM PROPOSAL

LASSEN NATIONAL FOREST
PACIFIC SOUTHWEST REGION

February 2011



UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

Executive Summary

Dominant forest type(s): *Sierra Mixed Conifer, Ponderosa pine, True Fir, Lodgepole pine*

Total acreage of the landscape: 369,036 acres Total acreage to receive treatment: 69,239 acres (NF Land) + 33,737 acres (non-NF Lands) Total number of NEPA ready acres: 42,400 acres (NF Land) Total number of acres in NEPA process: 57,000 acres (NF Land)

The landscape of the Burney-Hat Creek Basins Project is complex in geography, ecology, and ownership with considerable public forestland at high risk from high-intensity wildfire that could severely impact landscape integrity and community safety. The Basins area is in need of restoration to increase the resiliency of the landscape, reduce extreme fire risk, and improve forest health and diversity that sustains habitats necessary for a variety of wildlife species including the California spotted owl. This project will also improve degraded streams and meadows that have reduced ability to buffer flood flows, produce clean water, and provide vital aquatic habitat to a diminished yet prized and economically-important fishery.

This project is focused on a 400,000 acre landscape and the communities dependent on it, and involves federal and private land and a dynamic and diverse collaborative partnership group. Restoration of national forests and wetlands in the project area will protect public and private assets (e.g., timber products, homes), provide a sustainable supply of raw material to local mills and co-generation plants, sustain and increase needed jobs, improve local community health and well-being, and reduce future fire and management costs by 11 million dollars.

The Basins project is located around the community of Burney, California, which possesses two sawmills and three co-generation plants that produce energy from wood biomass. Treatments associated with this project will help maintain a sustainable flow of materials including saw logs and wood biomass for bio-energy totaling 950,000 ccf over ten years.

The Burney-Hat Creek Community Forest and Watershed Group has representatives from the Forest Service, private timber companies, recreation enthusiasts, environmental groups, Pacific Gas & Electric, ranchers, timber contractors, Pit River Tribe, Burney Fire District, and Hat Creek Valley Fire Safe Council. Other key partners include the Fall River Resource Conservation District, Sierra Institute for Community and Environment, and the Lassen Volcanic National Park, which launched projects with the Lassen National Forest to reduce fire risk on park land.

Unemployment in Burney in January of 2010 is over 22%. Local communities like Burney, Hat Creek, Old Station, Fall River Mills, McArthur, Bieber, Round Mountain, and Montgomery Creek rely on the national forest for recreational opportunities and for diverse wood products including a sustainable supply of sawlogs and biomass. This project invests in these communities by advancing sustainable landscape management through ecological restoration work.

Total dollar amount requested in FY11 \$604,629 (All on National Forest Land)

Total dollar amount requested for life of project \$10,782,680

Total dollar amount provided as Forest Service match in FY11 \$1,093,520

Total dollar amount provided as Forest Service match for life of project \$12,535,834

Total in-kind amount provided in Partnership Match in FY11 \$23,020

Total in-kind amount provided in Partnership Match for life of project \$321,040

Time frame for the project (from start to finish) **2011-2019**

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Attachments

- Attachment A: Planned Accomplishment Table
- Attachment B: Reduction of related wildfire management costs
 - “Results- Cost Savings” of R-CAT spreadsheet available on the CFLRP website¹
 - Documentation of assumptions and data sources used when populating the R-CAT spreadsheet
- Attachment C: Members of the Collaborative Table
- Attachment D: Letter of Commitment
- Attachment E: Predicted Jobs Table from TREAT spreadsheet
- Attachment F: Funding Estimates
- Attachment G: Maps

¹An Internet hyperlink is provided here, and in several locations in this proposal, that connects to a website containing a project library with all the documents mentioned in the proposal. The documents help provide a complete picture of project development. <http://www.sierrainstitute.us/index.php/projects/burney-hat-creek>

Ecological, Social and Economic Context

The Burney-Hat Creek Basins Project is located on the Hat Creek Ranger District of the Lassen National Forest and neighboring private lands in Northern California. The Project area is in Shasta County 60 miles east of the County Seat in the City of Redding which sits at the northern end of the central valley. The eastern portion of Shasta County has no incorporated towns and depends heavily on citizen organizations to supplement and focus state and county support.

This location is often referred to as the Crossroads, heart of one of the most fascinating areas of California. Here the granite of the Sierra Nevada, the lava of the Cascades and the Modoc Plateau, and the sagebrush of the Great Basin meet. Together with the adjacent Fall River Valley, the Burney-Hat Creek Basins has perhaps the greatest concentration of springs in the country. The area provides important migration routes and habitat for a variety of wildlife species. It is an area that greets visitors and residents alike with a wide array of recreational opportunities and adventures, and is a prized location for retirement and recreation homes. Lassen Volcanic National Park forms the south end of the area, and McArthur-Burney Falls State Park sits at the northern tip. (Attachment G map) Local livelihoods depend upon timber industry and forest products, ranching and rangeland use, crop production, hydro power and alternative energy, recreation and tourism, retail trade, business support and visitor services, and government services. The landscape is the primary attribute of the area, and the foundation of most jobs.

The Project area encompasses a 369,036-acre landscape of which, 124,463 acres are in the Burney Creek basin, 227,577 acres are in the Hat Creek basin, and 16,996 acres are in North Battle Creek watershed, part of an important endangered anadromous fish stream containing critical recovery habitat. All are part of the upper watershed of the Sacramento River, a critical water supply area for the State of California. The landscape is a mix of federal, state, and private ownerships (see table below) with the Forest Service and National Park Service managing much of the upper watersheds, and the lower watersheds a mosaic of private, state and federal ownership. The Basins Project takes an all-lands approach to ecological restoration and involves collaboration among federal, private, tribal, state, and other surrounding land owners and stakeholders. The Burney-Hat Creek Community Forest and Watershed Group (see section on Collaboration) is the primary collaborative group. It includes major landowners and community members who work together to advance sustainable land management across all lands in the Burney Creek and Hat Creek basins. Public and private lands in these drainages are an important part of the landscape that the Towns of Burney, Johnson Park, Clark Creek, Cassel, Hat Creek, Old Station, and other dispersed residents and visitors rely upon for natural resource-based employment, recreation, and quality of life.

The Basins Project is within the aboriginal lands of the Pit River Tribe and contains numerous important cultural sites. In addition to being part of the Burney-Hat Creek Group, the Pit River Tribe and the Lassen National Forest enjoy a strong relationship to mutually protect the heritage resources and values of the Tribe. This project benefits from and draws upon this relationship.

The majority of the landscape (72 percent) is forested. Most of the forests are of the Sierran Mixed Conifer type with intermixed pine plantations and natural ponderosa pine stands. Higher elevations support fir and lodgepole stands. Shrublands, grasslands and meadows make up the

next highest percentage of the landscape with several very large brushfields on National Forest System (NFS) lands and some large grasslands on private property. Over much of the NFS lands, the contemporary vegetation types and conditions depart notably from historic conditions. Data collected on 100,000 acres of NFS lands within this landscape show a dramatic shift in species composition, density, and structure. When the General Land Office surveyed this landscape in 1883, approximately 50 percent of the forested areas were made up of fire-evolved pine species.

Land Manager / Owner	Category	Acres	Ownership
Forest Service	Federal Government	200,003	54.2%
Fruit Growers Supply	Private	78,173	21.2%
Other Private	Ranches, Non-Industrial Forest	26,387	7.2%
Lassen Volcanic National Park	Federal Government	25,774	7.0%
Sierra Pacific Industries	Private - Industrial Landowner	24,156	6.5%
Pacific Gas & Electric	Private - Utility	6,664	1.8%
Bureau of Land Management	Federal Government	3,907	1.1%
Wm. Beaty and Associates	Private - Industrial Landowner	2,237	0.6%
Roseburg	Private - Industrial Landowner	950	0.3%
Latour State Forest	State Government	688	0.2%
Bureau of Indian Affairs	Federal Government	77	0.0%
Shasta County	Local Government	21	0.0%

Table 1. Current Land Ownership

Today, the pine component is approximately 30 percent. This shift coincides with a century of fire suppression, historic harvest practices, and the increase of white fir. Historically, white fir comprised about 20 percent of the forest cover, but now constitutes 50 percent. Not only have the upland forests changed, but the meadows, grasslands, and riparian areas have changed dramatically as well. Fire exclusion has allowed the encroachment of conifers into meadows and grasslands, aspen stands, and riparian areas generally reducing their size and function. Recent human activity, including fire suppression, is leading to a homogenous vegetative cover lacking in species diversity, and vertical and lateral structure. The homogenous landscape lacks vigor, is highly susceptible to insects, disease and fire, and, overall, is in poor health. The degraded landscape provides less wildlife habitat, and reduces hydrologic function, carbon sequestration, resilience to climate change, and socio-economic benefits to local communities.

The reduction of fire-resilient pine species and the build-up of fuels, both live and dead, have left the area primed for a potentially landscape-scale, forest-replacing fire. Past management practices have disrupted the historic fire return interval. Considering the increase in fuels, the historic severity of fires in the surrounding area and climate change, there is a moderate to high chance that a wildfire today would become a large, high-severity fire that would put the safety of suppression personnel, resources, and communities at risk. The desired condition is to allow fires of a few acres to several hundred acres in size to work naturally on the landscape and maintain heterogeneity through a projected fire return interval of 15 to 25 years, perhaps longer at some higher elevations.

Active and adaptive management of the area would reduce the fuels and greatly reduce the risk of forest-replacing fire. Mechanical and hand treatments are far less costly than large fire suppression. The 2009 Hat Creek Complex Fire burned approximately 11,000 acres the Basins Project area and cost nearly ten million dollars to suppress. Treatments utilize forest resources for beneficial use, maintain a healthy forest, provide socio-economic benefit, and assure long-term sustainability of the forest. It is far more costly to have a forest burn than it is to restore the forest to a fire-resilient condition prior to the occurrence of fire. The Basins Project is designed to ensure the forest is restored to sustainable, fire-resilient condition that provides the broadest range of ecosystem and socio-economic benefits.

Portions of this landscape are at high risk to other threats including insect and disease outbreaks. Tree mortality associated with insects and diseases has increase during the last five years. The 2010 Forest Health Monitoring Aerial survey results show the Lassen National Forest tree mortality is at least double that of any national forest in the state. The greatest concentration of mortality runs from Lassen Volcanic National Park to the northwest through the Basins Project area. Mountain pine beetle are successfully attacking lodgepole pine stands on NFS lands in the Basins area leaving a large fuels build up. Forest Health Protection scientists have recorded an increase in Douglas-fir Tussock moth, fir-engraver, pine shoot borer, and western and Jeffrey pine beetle. <http://www.sierrainstitute.us/index.php/projects/burney-hat-creek>

An additional looming threat to this mountain and basin landscape is climate change. The National Aeronautics and Space Administration and other scientists have documented dramatic increases in spring temperatures, and are anticipating longer and dryer summers in this already seasonally dry Mediterranean climate. In a large portion of this landscape water availability to trees ends in late July. With climate change these trees will have prolonged periods without water, further reducing their ability to resist attacks from beetles and disease, and making them more susceptible to fire.

The Burney-Hat Creek Collaborative identified quality of life as a core value to the group's purpose. The Basins have long been a draw for summer and winter recreation users. Camping, hiking, driving, horseback riding, off-highway-vehicle (OHV) riding, fishing, hunting, skiing, snowmobiling, and sledding are all activities that bring people to the area. This provides critical demand for services that support jobs in the local communities. The local forests provide recreation and lifestyle support for residents. Hunting, fishing and fuelwood cutting are among the most important. A healthy and sustainable forest is foundational to ensuring the continued availability of these activities, and the continued healthy lifestyle of local residents. "In the most profound sense, we will not achieve the agency's mission without sustainable recreation and tourism" – US Forest Service Framework for Sustainable Recreation. Restoration of a healthy forest is paramount for sustainable recreation and tourism, and critical to the economic survival of Basins area communities.

Human communities in the Basin Project Area have economies and jobs tied to the land. Over 9,000 people live in the Basins area. The town of Burney is the largest community, with over 3,000 residents, and is the commercial hub of eastern Shasta County. The area is somewhat unusual in rural California because there remains an active timber industry and wood products infrastructure - including fuel for electricity-producing plants, agriculture and ranching. There

are two active sawmills, and three cogeneration facilities in Burney, two linked to the sawmills and a third of which has been on and off line due to the price of chips and poor reimbursement rates for the power it produces. Various employment sectors provide services to those who come to hunt, fish, take in the scenery, or play in some other way in the region. This latter group includes retirees and second homeowners who have recently moved to the area to take in the beauty of the land and enjoy the peaceful rural lifestyle the area offers. These residents generate jobs associated with building new homes and refurbishing old ones, and the need for residential services.

Even with these rural business opportunities in the area, the unemployment in Burney was 18.5 percent in 2009. By the beginning of 2010 it was over 22 percent, a level far higher than any month in recent years. From 2000 to 2006, and prior to the recession, unemployment was relatively stable, holding at three to four percent in Fall River Mills and eight to nine percent in Burney. In 2007, however, unemployment began to rise and did so precipitously in 2008 and 2009, as the recession took hold. The unemployment rate declined somewhat with the increase in summer jobs, but as of December 2010 the unemployment rate in Burney stood at 20 percent, higher than the 16 percent county unemployment rate, which is four percent higher than the State of California's rate.

The population for Burney and the rest of the area climbed steadily from 1960 through 1990, when it leveled or even declined somewhat. Though the absolute population changed little, the demographic composition has been changing: younger families with children have been leaving as family-wage jobs in the resources and other sectors have disappeared, and older, typically retired, persons have moved in. Local school districts have lost 30 to 40 percent of their students since the early 1990s, threatening the viability of schools, particularly the high schools. Local communities benefiting from this project include Burney, Johnson Park, Clark Creek, Hat Creek, Old Station, Fall River Mills, McArthur, Bieber, Round Mountain, and Montgomery Creek. (See Benefits to Local Economies section)

Summary of Landscape Strategy

The Burney-Hat Creek Basins Project area is a significant part of the community and economic base for eastern Shasta County. Strategic and collaborative planning is a vital step for ensuring ecological restoration and forest sustainability upon which the communities depend. The Lassen National Forest (LNF) landscape restoration strategy is built upon a foundation of guiding documents, landscape specific volumes and the recommendations of the Burney-Hat Creek collaborative. Foundational direction is derived from the Forest Service Manual 2020 *Ecological Restoration and Resilience* (March 2010), *Lassen National Forest Land and Resource Management Plan* amended by the Quincy Library Group Act and environmental impact statement (EIS), and the *Sierra Nevada Forest Plan Amendment*.

The Lassen National Forest engaged a collaborative process in 2007 for the development of the Final EIS for the North 49 Forest Health Recovery Project (42,400 acres within the Basins Project area.) Environmental groups, local timber industry, the Quincy Library Group, and County Forester provided information and perspective to Forest Service planners and resource specialists. The selected alternative and Record of Decision (signed April 24, 2008) draw on the best available science for treatments that achieve true heterogeneity, and species and structural

diversity on the landscape. *An Ecosystem Management Strategy for Sierran Mixed-Conifer Forests* (GTR 220) was published by the Pacific Southwest Research Station in March 2009. The North 49 Project included nearly all the management recommendations in the GTR. Treatments based on these principles are refined for site-specific project conditions on the LNF. These include:

- Treat surface fuels along with ladder fuels
- Select trees to improve species diversity of remaining trees
- Maintain a multi-aged forest
- Radial-release thin around large (legacy) trees to preserve older age structure
- Promote heterogeneity with variable horizontal structure and on a landscape scale
- Promote within-stand variability
- Establish groupings (clumps) rather than even spacing

The Hat Creek Watershed Assessment and Watershed Management Plan and the *Burney Creek Watershed Assessment and Watershed Management Plan* were both finalized in March 2010. These assessments and plans constitute an initial collaborative approach and direction for a watershed and landscape restoration strategy in the Burney-Hat Creek basins. They present goals and objectives for the restoration and management of the watersheds on all land ownerships. <http://www.sierrainstitute.us/index.php/projects/burney-hat-creek> The plans were prepared through the Fall River Resource Conservation District (RCD). The Fall River RCD is set up under California law and managed by a locally appointed, independent board of directors responsible for delivering resource-based services and products to local people and communities. In addition to the watershed assessments, the RCD obtained a Shasta County Resource Advisory Committee (RAC) grant and launched the Burney Creek–Hat Creek Community Forest Project to develop a plan and projects that integrate sustainable natural resource management with socioeconomic development across the two-watershed area. The results were presented to the RCD in March 2010 with a key recommendation to establish a collaborative body to clarify the project’s scope and goals and to identify priority activities. The Burney-Hat Creek Community Forest and Watershed Group (Collaborative) began meeting in April 2010. The collaborative quickly incorporated ecological restoration and all-lands management concepts into project planning focused on ecosystem sustainability and socioeconomic stability. The Burney-Hat Creek Basins Project proposal is a direct result of that collaboration.

The Lassen National Forest continues to incorporate the most current science and thinking into the Forest landscape strategy. Significant landscape restoration strategy documents were produced in 2010. National Level guidance provided in the Forest Service Manual 2020 *Ecological Restoration and Resilience* forms the core of the Regional and Forest strategies. The Forest Service Southwest Region *Ecological Restoration Leadership Intent* provides the umbrella goal for the Basins Project. The goal is “to retain and reestablish ecological resilience of these lands to achieve sustainable management on our wildlands and forests and provide a broad range of ecosystem services. Ecologically healthy and resilient landscapes will have greater capacity to survive natural disturbances and large scale threats to sustainability, especially under changing and uncertain future environmental conditions, such as those driven by climate change and increasing human use.” The Lassen National Forest ecological restoration strategy builds upon the goals presented in national and regional guiding documents. Strategic and project-specific ecological restoration goals for the LNF include:

1. Reestablish a fire-adapted and resilient landscape
2. Reestablish healthy forest conditions resistant to insects, disease and climate change
3. Repair hydrologic function to enhance water supply and water quality
4. Restore and protect wildlife and fish habitat
5. Identify opportunities to sustain ecological refugia that may sustain ecological diversity
6. Establish and sustain overall ecosystem functions
7. Integrate resource management activities to achieve synergistic support for restoration
8. Monitor results and use adaptive management to improve restoration effectiveness
9. Provide sustainable use of forest products
10. Enhance recreational opportunities and quality of experience
11. Identify potential needs to regulate human use to ensure ecological system function
12. Collaborate across land ownerships and all lands to achieve ecological restoration

The Lassen National Forest has built an ecological restoration and landscape-scale strategy incorporating collaborative participation, best available science for landscape treatments, and utilization of supporting information. Such information comes from the Fire and Resource Assessment Program under the California Department of Forestry and Fire Protection produced *California's Forest and Rangelands: 2010 Assessment*. That assessment identifies the Burney-Hat Creek Basins area as water storage watersheds containing high priority and high use surface water runoff, groundwater basins and Forest meadows. The Basins area is part of the Pit River and upper Sacramento River watershed, one of the watersheds with the highest priority water management issues in the State of California. The Burney-Hat Creek Basins area also contains high priority wildlife nesting and rearing habitat, much of which is described as high or medium priority landscape of wildfire threat to areas important for wildlife habitat. From the assessment, the State produced *California's Forests and Rangelands: 2010 Strategy Report* which outlines landscape scale strategies for managing the important forests and rangelands that are critical to the economic, social and environmental wellbeing of California. The State strategy is complimentary to the Lassen National Forest strategy and describes common goals.

The Lassen National Forest landscape restoration strategy is consistent with the Region 5 Ecological Restoration Leadership Intent presented to all Regional Forest Service employees in May 2010. This document sets ecological restoration as the driving force behind the Region's wildland and forest stewardship efforts across all program areas and activities. It is the intent of Region 5 and the Lassen National Forest to promote the all lands ecological restoration vision outlined by the Secretary of Agriculture.

The Lassen National Forest and the Burney-Hat Creek Collaborative include an emphasis on recreational opportunities and the quality of life in the landscape restoration strategy. Recreation is part of the local economic engine and collaborative land management activities. These are incorporated into planned land treatments. Recreation-specific projects are conducted annually within the Basins Project area, often through collaborative and volunteer support. These include trail maintenance, campground management, wilderness management, winter recreation management, and visitor services. Most large tracts of private lands are open to recreational uses. Hunting, fishing, camping, and ATV riding are among the most common uses. The landscape restoration strategy improves collaborative recreation planning and management across land ownerships.

Proposed Treatment

The landscape for the Burney-Hat Creek Basins Project was identified as the area of greatest interest by the Burney-Hat Creek Community Forest and Watershed Group. The importance of the landscape condition to the local economy and quality of life also gave rise to the collaborative group name. Renowned for its recreational opportunities, stunning vistas of volcanic landforms in the shadows of Lassen Peak and Mount Shasta, and its working landscape of ranching and timber production, the Burney and Hat Creek watersheds have long been a place of socioeconomic interest in northern California. Approximately 140,947 acres of the 369,036 acre project area are national forest system lands, the majority of which are forested with interspersed meadows, streams and lava reefs. The 16,335-acre Thousand Lakes Wilderness area sits in the center of the project area. The two watersheds feed into the Sacramento River system, perhaps the most important system in the State. North Battle Creek is part of Battle Creek system which contains critical habitat for recovery of endangered anadromous fish. The geographic and bioregional crossroads nature of the landscape gives rise to a variety of habitats suitable for several important wildlife species of interest including California spotted owl, northern goshawk, American marten, and Pacific fisher. The high fuel loads within the two watersheds support a very real threat of severe fire near the settlements of Burney, Johnson Park, Clark Creek, Cassel, Hat Creek and Old Station, and scattered private homes. Achieving meaningful improvement to the declining forest condition within these watersheds requires a landscape and all-lands approach organized through a collaborative effort.

National forest lands in the Basins area show a striking change in species diversity, density, and structure, as discussed above. The suppression of fire without mitigating management practices has filled the forest with an unnatural proportion of shade and density tolerant, but fire intolerant species like white fir. Although the landscape evolved with fire, the current condition does not allow for fire occurrence or use without severe harmful results. Fuel loading in the forest is far greater than would have been found under a natural fire regime. Because of the Mediterranean climate the fuels will continue to accumulate in the hot dry summer and cold wet winter every year until something removes them. Even without crown fire, a fire with the current surface and ladder fuel load is highly likely to overheat and kill the tree cambium and leave forest stands with almost total mortality. Rather than producing helpful effects, such a fire could result in a stand replacing, or even forest-replacing event.

Restoring fire resilience by decreasing surface and ladder fuels is a high priority, but is only a portion of the restoration work. Reducing stand densities is an important goal to stem insect and disease outbreaks while improving growing conditions and diversity for the site-appropriate species. The current density of the Basins Project forests is approximately five times the trees per acre that existed historically. This high density puts an enormous toll on the trees which are competing for limited resources like water. The high densities lead to mortality which is showing itself in the dead fuel load. High priority is placed on retaining and enhancing the large but remnant legacy pine trees that tell the story of a different time when fire periodically removed fuel accumulations and left the forest in a mosaic of structure, size, and density. Using uneven-aged management with group selections to restore pine in areas where they have been diminished is a critical treatment principle for achieving a sustainable forest.

The landscape once consisted of varying sized forest patches, and openings, which today have filled in to give a homogenous structure that is limited in its benefits. Without gaps and heterogeneity many wildlife species will not flourish in these forests. Planned treatments would reduce surface and ladder fuels, improve stand density and reduce stress, improve insect and disease resistance, increase heterogeneity, improve forest structure and wildlife habitat, and increase water storage and delivery capacity.

The North 49 Forest Health Recovery Project is an example of how treatments will be done in the Basins project. Treatments include radial release of legacy pine, site specific group selection and pine restoration areas, thinning through the diameter classes to improve species composition and structure, thinning of tree plantations, mastication of brush fields, and a number of fuels activities to prepare the area for prescribed fire. Harvest includes sawlog and biomass removal using mostly mechanical feller-bunchers that are whole-tree yarded using grapple skidders. Sawlogs are sorted and distributed to various local sawmills depending on size and species. Biomass trees include those trees that cannot be made into dimensional lumber, or smaller in diameter (3 inch to 10 inch diameter). They will be chipped at the landing and blown into waiting chip vans that will haul them to the nearby biomass cogeneration facilities. Seven timber sales or stewardship contracts and a variety of burn projects and service contracts will be done under the North 49 Project. Two timber sales have already sold that will restore national forest lands on almost 3,000 acres. North 49 will provide valuable materials in sawlog and biomass fuel to the mills for five to six years, averaging 25,000 ccf per year.

The acres of treatment planned in the Burney-Hat Creek Basins Project include eight sub-project areas that will be under separate National Environmental Policy Act (NEPA) decisions. Each of those decisions will authorize one to seven timber sales and multiple units for biomass thinning, mastication, or burning. The planned sub-project areas within the Basins Project boundary are included in the table 2. Sub-project implementation will be done in the same order as the NEPA decisions are made, and work will be prioritized using the considerations listed below. Careful consideration was given to the timing of the projects across the Basins landscape.

Considerations include those areas most in need of ecological restoration, proximity to

wildland-urban interface (WUI), dangerous fuel loads, forest health concerns, compatibility with projects on adjoining private lands, and the impacts to key wildlife species like the California spotted owl and furbearers. The Basins Project area contains 101,386 acres of WUI. Of that, 39,543 acres are national forest lands and 10,024 acres are planned for treatment. A significant portion of WUI is not treatable because it is rugged lava fields vegetated in brush. This makes treatment of surrounding areas even more important for the management of wildfire. The communities of Hat Creek, Cassel and Old Station are included in the Hat Creek Valley Fire Safe Council's Strategic Fuels Reduction Plan. Treating WUI areas is a high priority.

Sub-Project Name	NEPA Decision	Acres
N49	2008	16,093
Whittington	2011	4,162
4 Corners	2013	7,078
Plum	2014	4,295
Badger	2013	24,134
Snow Mountain	2015	4,337
Dutch	2016	1,957
Backbone	2017	7,183
	Totals	69,239

Table 2. Sub-Project NEPA Schedule

There are no intact old growth stands on NFS lands in the Basins landscape. There are individual old trees and clumps that remain. Part of the strategy for NFS lands is to improve conditions for these biological legacies by thinning around them to improve growing conditions. On NFS lands all trees larger than 30 inch diameter would be retained in accordance with the amended Land and Resource Management Plan. This treatment is consistent with the guidance found in the publication *An Ecosystem Management Strategy for Sierran Mixed-Conifer Forests* (GTR 220). The restoration strategy is based on the best available science and is a fluid working strategy that adapts with new science. Fire history studies have been conducted on this landscape and have consistently shown that fire return intervals have changed since the turn of the century. Work is ongoing with the Pacific Southwest Research Center and the University of California system to determine the historic structures in place prior to fire suppression.

The North 49 Project will restore approximately 16,093 acres of NFS lands. However, the ratio of sawlog to biomass is insufficient for harvest receipts to fund all the biomass removal, which costs more to remove than its market value. Funding through CFLR would maximize the restoration efforts and not leave EIS-ready acres untreated in an area in need of restoration. Whittington is the next restoration project in this landscape on NFS lands that is in the NEPA process and should have a decision in the summer of 2011. The Whittington project will restore aspen and upland sierra mixed conifer forest improving conditions for black oak and pine. The Whittington project will restore and enhance one of the few populations of the fire-dependent Baker's cypress in California. Through adaptive management in the Whittington project research will be conducted on restoration treatments for Baker's cypress. Inventory work has been completed on the Badger project, the next large restoration EIS due for a decision in 2012. This project abuts Lassen Volcanic National Park and would restore riparian zones, aspen, meadows, mixed conifer forest and link with the park to provide habitat and protection for species like California spotted owl, goshawk, and pine marten. Collaboration with the National Park Service is ongoing and similar treatments are proposed for park lands to enable them the opportunity to manage better with prescribed fire.

In treated areas that have been thinned and underburned, expected fire behavior would have flame lengths less than 4 feet. With 4-foot flame lengths fire can be fought using hand crews and engines. Several large fires in 2008 and 2009 on the Hat Creek Ranger District hit thinned forest lands and dramatically changed in behavior. In 2008 the Peterson fire hit the Pitville thinning project. In 2009 the Butte fire hit the North Coble thinning project. On both fires the thinning units changed fire behavior from a high intensity fire to a low intensity surface fire that was then contained. Natural fire regimes will be reestablished through thinning to reduce ladder fuels and tree densities followed by a surface fuel treatment. The surface fuel treatment can be a combination of machine piling, hand piling followed by underburning. Brush fields will be treated with a combination of crushing strips to facilitate burning and then broadcast burning of the brush.

	Acres	Ten Year Treatments	Treated Percent
NFS Lands	200003	69239	34.62%
Private	169034	33737	19.96%
Total	369037	102976	27.90%

Table 3. Percent of Landscape Treated

The Basins Project treatments are expected to lower Forest Service costs for fire suppression by reducing the risk of uncharacteristically large and damaging wildfires. Following all proposed treatments an FS-Pro run shows 37percent reduction burn probability across the landscape. The Wildland Fire Management Risk and Cost

Analysis Tools Package (R-CAT) spreadsheet indicates the proposed treatments on 35 percent of the national forest service lands will avoid more than 11 million dollars in fire suppression costs. <http://www.sierrainstitute.us/index.php/projects/burney-hat-creek> Rehabilitation, BAER, and restoration costs would also be part of the cost saving.

Prescribed fire will be used to restore the landscape by periodically reducing the surface fuels and reducing ladder fuels. Once the surface fuels are reduced, there will be a reduction in duff and more mineral soil exposed. Following prescribed burning of timber stands, there is an increase in grasses and forbs. In the event of a natural ignition, wildfire occurring in a treated area could be managed to meet multiple objectives and resource benefits. Prescribe burning in the project area will be a combination of underburning and pile burning. In areas where existing fuel loadings would result in too high of a fire intensity for underburning, machine piling will be used to reduce the existing fuel loadings. Once the machine piles are burned, follow-up underburning would occur. In areas that existing fuel loadings will meet the objectives of the project underburning will be conducted to reduce surface fuels and increase the growth of grasses and forbs. Treatment schedules will be based on a combination of the fire regime, accumulations of surface fuels and ingrowth of small trees and brush. The estimated prescribed burn schedule would mimic the desired fire return interval, between 15 to 25 years.

Collaboration and Multi-party Monitoring

The Lassen National Forest has a relatively long history of working with communities on an individual project basis, which forms the basis for the collaborative work that is the foundation of this proposal. Concerns over severe fire potential in populated rural communities led to a more programmatic approach for fuels reduction in the Hat Creek Valley. In 2008, *A Strategic Fuel Reduction Plan For The Hat Creek Valley Fire Safe Council and The Communities Of Old Station, Hat Creek and Cassel* was signed by the Shasta-Trinity Counties Unit Chief for CALFIRE, the Chairperson of the Shasta County Board of Supervisors and the Hat Creek District Ranger, Lassen National Forest.

Collaborative and multi-party work focused in the Basins area started in 2008 with the development of the North 49 Project final EIS based on the Healthy Forest Restoration Act, which required collaboration. With a focus on seven forest treatment sites, it involved environmental, industry, county and other stakeholders working out their differences in the field. Agreements involving wildlife concerns, type and intensity of and diameter limits associated with fuels thinning and other issues were critical in the Lassen National Forest's development of the first ecological restoration-focused projects that are part of the Basins Project.

Based on this success, the pressing landscape restoration needs of the Basins Project area (and the fires of 2009), along with the commitment of the Lassen National Forest and the Hat Creek Ranger District to continuing this kind of work, the Shasta Resource Advisory Committee (RAC) targeted the Basins area for investment of RAC dollars. Recognizing that their committee would sunset when the Secure Rural School legislation ended in 2012, the RAC agreed to implement a "legacy" project: a project that would involve the establishment of a collaborative to implement a landscape-level project to reduce the risk of catastrophic wildfire, improve resiliency and wildlife health, and improve socioeconomic conditions in local communities. In 2009, the RAC launched the project, supporting first an evaluation of local social and economic conditions, and how those conditions were linked to the health of landscape. Second they supported a

stakeholder assessment, which involved interviews of over 35 stakeholders from the following groups (among others): environmental, fire safe/services, fishing and the recreation service industry, independent forest contractors, Forest Service and other agencies, local ranches, private industrial timberland managers, the Pit River Tribe, local mill and cogeneration facilities.

Among the stakeholders, there was broad agreement that the Basins Project should address catastrophic fire risk, forest health and unemployment. A number of stakeholders mentioned that there was an acute need to restore riparian areas and fisheries—including the Hat Creek “blue-ribbon” trout fishery, develop and restore recreation opportunities, and improve wildlife management. Stakeholders recommended activities ranging from improved information sharing and landscape-scale planning to specific, on-the-ground projects. From this group and from these discussions a diverse group was invited to become the Burney-Hat Creek Community Forest and Watershed Group. The Group was launched by Fall River Resource Conservation District in early 2010. This launch was accompanied by a commitment of the Lassen National Forest to actively engage this group. The Burney-Hat Creek Community Forest and Watershed Group has held half-day meetings roughly every other month since its inception, with additional work conducted by subcommittees and through sharing of information and discussion over the Internet. Group decision-making is consensus based.

The Burney-Hat Creek Community Forest and Watershed Group came together quickly, in part due to previous collaborative work and the stakeholder assessment that outlined considerable common ground and shared concerns. Speed and success was also the result of the desire and commitment of battle-weary participants to implement on-the-ground projects that made a difference on the landscape, and by a commitment to the vision and the support of the Shasta RAC. The Group submitted a proposal to the Shasta RAC in May of 2010 for three projects which were supported: Burney Creek Restoration (meadow restoration on private lands), Whittington Forest Restoration (plantation thinning on national forest land), and Lower Hat Creek Streambank Restoration (bank stabilization and erosion control on Pacific Gas & Electric land).

In addition to securing funding and launching initial projects, another highlight of the Group’s work involves the establishment of a private lands subcommittee and the agreement of industrial timberland managers to share data with the Forest Service. The purpose is to integrate management, including fire and wildlife protection, across the Basins landscape. This subcommittee initiated a separate and unique meeting with state regulators to explore if and how the regulators (i.e., Department of Fish & Game, Cal Fire, State Water Resources Control Board) will do multi-owner permitting for forestry and watershed projects with landscape-scale outcomes. State regulators not only felt it was possible, but identified ways to initiate single permits and other simplified means for securing approval for ownership spanning, linked landscape projects.

The Group’s focus is on Burney Creek and Hat Creek watersheds and a small portion of upper Battle Creek, all-lands management and includes landowner coordination and information sharing, and mutual support. The group met in January 2011 to help develop the scope of work offered in this proposal. The group approved the proposed project, but this does not mean blind adherence to project implementation. Group members have explicitly agreed that project outcomes must be monitored on a both a project and landscape basis. For example, the North 49 Project in which initial forest treatments will take place has baseline monitoring plots

established. And this project is linked to wildlife health and fire reduction and more across the landscape. As evidence of a commitment to long-term monitoring, over eight percent of the Basin Area project CFLR budget is dedicated to monitoring. This includes project and landscape-scale baseline monitoring that will allow continued evaluation of efforts over and beyond the life of the project. A portion of the monitoring budget is dedicated to assessing surface and subsurface water flows to evaluate the relationship and impact of the project on water resources and on critical wildlife and in source watersheds for California. The Fall River RCD has extensive experience in watershed restoration and wildlife ecology and is providing scientific support for this work. The RCD will be working to secure additional funds for this complex and important work. A portion of the monitoring budget is also dedicated to evaluation of socioeconomic outcomes in years 2, 4, 7, 10. The Sierra Institute for Community and Environment, a national leader in socioeconomic assessment, conducted the initial assessment and has agreed to provide this continued scientific support for the project.

The Group has been clear; monitoring is for the purpose of learning and to inform the program of work, across ecological, social and economic dimensions. This is not only to assure there are no unintended or unacceptable impacts, but to adaptively improve project design and outcomes across the Basins project area. This is especially important in light of climate change impacts in this mountain region. A complete multi-party monitoring framework (MPM) for the landscape has yet to be developed, although important steps on a project-by-project basis have been made. First, an extensive water quality monitoring program was conducted between 2003 and 2005 in the Burney and Hat Creek subwatersheds, led by the Fall River RCD. The intent was to document baseline water quality conditions, recognizing that many projects were being conducted and proposed for the future, and this baseline data could be used to show improvements if replicated at a later time. Second, a thorough socioeconomic assessment was conducted for the project area, which will also serve as pre-project data for future comparative purposes.

The North 49 projects are the result of multiple field trips and discussions among diverse interests. Finally, members of the Group and other stakeholder groups recognize the importance of integrating monitoring efforts and the need to have relevant information to guide future management decisions. This is highlighted by the fact that the Northeastern California Water Association, a private landowner group, was sought out by local stakeholders as the most appropriate group to lead the region in developing an Integrated Regional Water Management Plan through the State's certified program. The future MPM framework will collectively use existing activities by stakeholders (e.g. effectiveness monitoring, compliance based monitoring) to develop and refine future monitoring activities. For this project, some general methodology decisions have been made and future refinements are needed. More monitoring funding will be sought, along with adding or deepening existing partnerships with expertise in certain resource topics (e.g. University of California Center for Watershed Sciences, Pacific Southwest Research Station, and Point Reyes Bird Observatory).

Long-term project monitoring will include water monitoring, wildlife monitoring, vegetation monitoring, and socio-economic monitoring. This project will also examine the forest-water relationship in the Basins as it's affected by projects and climate change. Water monitoring is the most difficult and complex because of the underlying geology in the region (recent volcanics)

and surface flow and groundwater interactions. For example, water estimates from surface to spring emergence in Hat Creek has been estimated to average fifteen years. Nevertheless, determining project activities on surface and groundwater is critical to evaluating treatments and guiding future management decisions and developing an understanding that can be used to define ecosystem services for the region. In general, water monitoring will include strategic location of surface and ground water monitoring stations in relation to proposed treatments, but also expand the monitoring locations further from the treatment areas to a landscape level to more fully describe the interactions and their effects downstream, and to address other stakeholder interests (e.g. compliance monitoring). This approach will allow for greater understanding of water movement and greater monitoring coordination with other resources.

Wildlife monitoring will include the effects of treatments on avian species and migration corridors. Standard point counts will be used to determine breeding bird richness and abundance pre and post project for treatment areas. Partnership funds will be sought to help pay for this monitoring on Forest Service land. One of the treatment areas is known to link to a significant migration area, and pre and post monitoring for those species of interest will be conducted. Vegetation monitoring will measure pre-treatment conditions and post-treatment results to determine changes to vegetative cover and vigor and fire risk. Finally, an overarching goal of the project is to improve socio-economic conditions, including jobs maintained and created related to forest restoration. Baseline information has already been collected, and will be collected at year 2, 4, 7, and 10 after project initiation.

Utilization

The landscape restoration strategy is paramount to the utilization of forest products. The strategy presents a broad range of materials to be utilized from sawlogs up to 30 inches in diameter to thousands of acres of biomass production for chips. Achieving the desired heterogeneity, healthy stand density, resiliency, and adaptability to climate change can require the removal of more volume and the treatment of more acres than an even-aged, even-spaced approach to vegetation management. The North 49 project demonstrated this benefit in the EIS where comparative analysis demonstrated that the preferred action, a heterogeneity-based alternative, improved sawlog volume by 42,425 ccf over the thin-from-below proposed action. This resulted in an expected increase in value of about 7 million dollars. Ecologically-driven vegetation management can benefit the local economy as well as restore the landscape. This makes ecological restoration goals the deciding factor for all treatments.

Most vegetation treatments achieve the ecological restoration goals by removing selected trees between three and 30 inches in diameter. In general, trees larger than 10 inches become sawlogs and those between three inches and 10 inches are chipped with the tops of the sawlog trees and taken to a bioenergy plant where the chips are converted to electricity. Most of the sawlog-size material would be manufactured into dimensional lumber such as 2x4s for construction and industry. Incense cedar may be manufactured into decking, siding, molding, and shakes. A small portion of the material may go to specialty products such as posts and poles, furniture, and fuelwood.

Table 4 presents the estimated volume to be removed from NFS lands from the eight planned sub-projects during the life of the umbrella Burney-Hat Creek Basins Project. The majority of the material removed will be manufactured into dimensional lumber or chipped into biofuel for energy production.

Sub-Project Name	NEPA Decision	Acres	SAW MBF	SAW CCF	BIO CCF	TOTAL CCF
N49	2008	16,093	85,110	151,953	104,747	256,699
Whittington	2011	4,162	5,291	11,646	28,049	39,694
4 Corners	2013	7,078	8,998	19,805	47,701	67,505
Plum	2014	4,295	5,460	12,018	28,946	40,965
Badger	2013	24,134	127,636	227,877	157,084	384,961
Snow Mtn	2015	4,337	22,935	40,948	28,227	69,174
Dutch	2016	1,957	2,489	5,477	13,192	18,669
Backbone	2017	7,183	9,132	20,099	48,408	68,507
	Totals	69,239	267,051	489,822	456,354	946,176
	Per Acre		4	7	7	14
	Truckloads			48,982	48,318	

Table 4. Sub-Project Treatment Acres and Volumes

Assuming current prices, the sawlogs from all of the restoration treatments planned in the Burney-Hat Creek Basins Project could provide approximately 83 million dollars of on-the-stump value. This value does not reflect the cost of removing the sawlogs from the woods and transporting them to the mills. The anticipated value of the biomass material is approximately \$118,000. This value assumes the continuation of biomass subsidy programs, but does not reflect the cost of cutting and removing the material. This value at the landscape level should provide enough match funding to restore key areas where ecological restoration-based vegetation management does not provide enough value to complete the necessary work.

The Burney-Hat Creek Basins Project is perhaps the best location for industry and infrastructure support and capacity in California. The project area encompasses the town of Burney which currently contains two large operating sawmills and three bioenergy facilities. These facilities in combination can require more than a hundred truckloads of sawlogs and biomass daily. The ecological restoration treatments proposed in the Basins Project will provide approximately 100,000 loads of sawlogs and biomass over the next ten years from NFS lands alone. The project could provide approximately 70 loads a day during a typical operating season from NFS lands. During the next ten years, the project would help ensure these facilities stay running and producing valuable outputs in lumber and energy as well as maintaining and creating jobs in this rural area, and jobs to support the industry and employees.

In addition to the sawmills and biomass cogeneration plants, the project area has an extensive and high quality road system. Haul routes are well established and maintained. The ability to reach treatment units and the cost of maintaining the roads to the units is relatively low compared

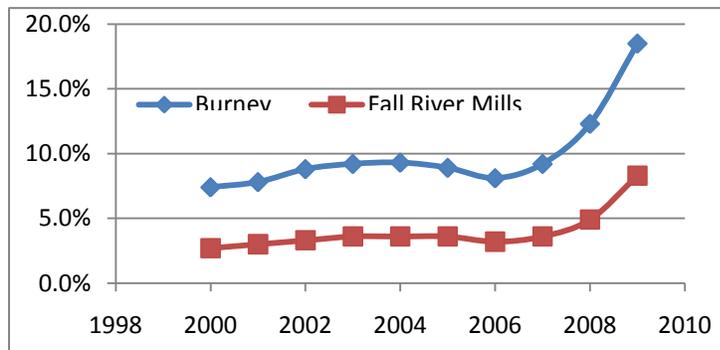
to other areas. Few temporary roads would be necessary, and there would be opportunities to decommission some roads to improve the hydrologic condition of the landscape during individual projects. The ground within the project area is almost entirely tractor accessible ground. Wheeled and tracked equipment are adequate for almost every planned treatment acre. This keeps the cost of operation low and the ability to achieve the treatment goals high. The existing road system also greatly reduces road construction or improvements needed during ecological restoration activities, and provide excellent access for monitoring results.

Benefits to Local Economies

Over 9,000 people live in communities within or adjacent to the Basins Project boundary. The economy of the area is closely tied to the landscape either through recreation and tourism services, the timber and wood products industry, power production associated with cogeneration facilities, and the service and government sectors serving the people living in the area. This project will improve employment not only in the forest products and timber industry, but also in the service sector and government services that are dependent on the forest industry and associated service employment, critical to the economic health of the area.

This Basins Project area is unusual because it is one of the last remaining regions in which there is a viable forest products industry, though the industry has been in decline in recent years. There are two mills and three cogeneration plants. Collectively the three plants comprise 5% of California's biomass co-generation capacity, though one is currently shuttered because of unfavorable power contracts. The project will bolster the local economy of the commercial hub in eastern Shasta County, and will provide a needed boost and restore some confidence to these operations and others serving these facilities.

The TREAT model shows 211 average annual full and part-time commercial forest products jobs produce as a result of this project. Another 11 full and part-time jobs are tied to monitoring activities. A total of 70 of these jobs will be full time work in the timber industry operating approximately nine months a year.



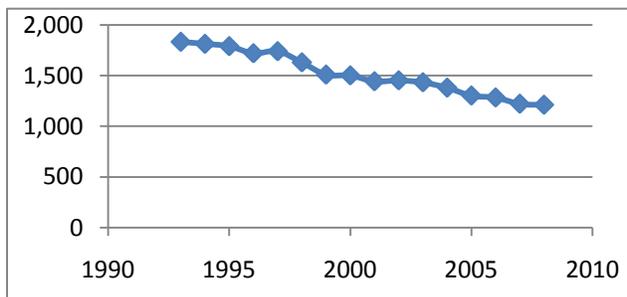
Unemployment Rate in Burney and Fall River Mills

While the TREAT model shows only three direct jobs in the biomass-cogen category, the biomass produced by the Basins Project could make the difference and lead to the re-opening of the currently shuttered cogeneration plant. This would lead to a minimum of an additional 15 full-time jobs. An estimated 30 to 50 full-time jobs in support sectors could be created, with the remaining jobs being seasonal or part-time. It is not envisioned that any of the monitoring

jobs would be full time, but when coupled with non-CFLR jobs, they will support full-time individuals in the area. These totals do not include recreation, tourism, and related service sector jobs, which appear unaccounted for in the TREAT model. These will likely increase as a result of improved wildlife habitat and watershed restoration. The increase in employment will help reverse the devastating unemployment trend of the last several years. The Forest Service has

engaged in employment and job contracting opportunities with the Pit River Tribe. The Basins Project would provide improved opportunities to work with the Tribe and solidify those opportunities.

The increase in employment will have more than secondary impacts. The three largest employers of the project area are the local hospital, Mayers Memorial Hospital, the Fall River Joint Unified School District and Sierra Pacific Industries (SPI). The number of employees for the school district and SPI, as reported by the Burney Chamber of Commerce, are nearly equal. The total number of forest product industry jobs has declined from 1994 to 2007. Compared to comprising 30 percent of all jobs in the early 1990s, by 2000 the forest product industry jobs totaled just 20 percent of all private payroll jobs, and, with the exception of 2003, remained at 20 percent through 2007. The increase in forest-related jobs will support the local hospital and will reduce if not eliminate declining enrollment in the local school district, which has declined by more than one-third over the last 15 years.



Student Enrollment in Fall River Joint Unified School District 1992-2009

Improved employment will also improve the economy and contribute to reducing the number of children receiving free and reduced price lunches. For example, over the last three years, Burney Jr./Sr. High School free and reduced lunch program participation has increased from 41 to 55 percent of all students.

Fall River Elementary School has seen an increase in participation from 57 to 66 percent, while the Fall River Jr./Sr. High

School free and reduced lunch participation rose from 34 percent in 2007-2008 school year to 51percent two years later.

The changing demographics of the area associated with the decrease in younger, mostly family residents and increase in older residents affects more than the school. Many of these older residents are retirees moving to the area to claim their piece of the landscape and creating more WUI. Fire protection due to climatic change and demographic shifts is more important than ever. This project has been from the start focused on reducing the risk to human communities by restoring forest health and reducing the risk of catastrophic wildfire in corridors that are mostly at risk, especially Burney and Johnson Park, along with some other outlying communities.

This project will help not only retain the timber industry that remains, but will likely provide material over a project period that will result in renewed investment and increased capacity. It will also provide security to the local mill owners and encourage, at minimum, continued operation and, more likely, increased investment in already existing and functioning facilities.

The Basins Project is benefited by the existing local timber-based industry and infrastructure, and a readily available and experienced workforce. No local training is needed to implement the Project or to take advantage of the jobs that would be created. There is a strong and highly experienced contractor pool in that is experienced in working with the forest service and private property owners.

The Burney-Hat Creek Community Forest and Watershed Group made ensuring local economic benefit a key principle of its role. Among ten items the Collaborative identified as priorities, the group's top goal is: "We have a vision for the community and quality of life, that we're part of the demonstration of success: watershed, wildlife, habitat, sustainable landscape and communities. We're not just improving landscape but outcomes for communities and people...on public and private land." The group supports the use of a stewardship contract for one or more of the North 49 project sales. They have also agreed in principle that best value contracting be considered. The Burney-Hat Creek Community Forest and Watershed Group has made it clear that it will be actively engaged in ensuring that the projects return benefits to the local communities as well as improve landscape resiliency.

Funding Plan

The project budget and multi-party monitoring plan has been developed to treat all ecological restoration and forest health needs in the Burney-Hat Creek Basins project area on national forest system lands, except for those areas that can be funded with revenue retained from harvesting in units with greater saw log values, or from areas where the forest service has opportunities to acquire other grant funds. For units that produce revenue that can be retained in a trust fund account, such as Knutson-Vandenberg Act account, additional restoration work will be conducted within the project area. In all, eight distinct sub-project areas have been identified for treatment and each of these includes multiple treatment units. This nested approach is highly scalable and variable to adapt to any changes in available funding. The project is also well poised for adaptability to an uncertain future caused by changing conditions such as insect or disease outbreaks, or fire. If the full CFLR funding requested is not received treatment units can be adjusted or dropped without changing the ecological restoration strategy. Changes in the funding request would affect the overall achievements and socioeconomic conditions.

The monitoring budget, estimated at eight percent of the requested CFLR funds, is designed to fully evaluate results of landscape-scale treatments and is vital to ensuring the anticipated outcome is achieved. Monitoring will focus on four areas: hydrology, wildlife, vegetation, and socioeconomic conditions. Pre-project and pre-treatment baseline data will need to be collected in order to measure change, and the effectiveness and benefits of the treatments. Monitoring will occur each year with some years requiring more in depth monitoring work than other years. Greater costs for hydrology monitoring are allocated to the first few years to develop gauging stations, rating curves, and drill groundwater monitoring wells. Multiple surface water gauging stations are proposed as are strategically selected locations to install groundwater wells near treatment areas. Funds requested for hydrology monitoring, and other resource monitoring are sufficient to adequately evaluate project effectiveness. There is also significant opportunity to expand the monitoring through future partnerships and funds to conduct wildlife and vegetation monitoring on private lands to increase the scale of the monitoring and greatly add to the information collected and increasing the effectiveness of the requested CFLR funding.

Other investments anticipated on the landscape include those practices conducted by private timber owners in forested areas, and practices focusing on stream and meadow restoration on public and private land (e.g. timber owners, farm and ranch owners). No dollar values are assigned to Partnership Funds (Attachment F) for forestry activities by private industrial timber

managers, although their management activities (i.e. thinning, fuel break installation) clearly have benefits to maintaining healthy and resilient forests on federal lands.

The dynamic nature of the Basins Project has the strength of attracting additional private funding from partners interested in investing in ecological restoration on federal land. Funding sources such as the National Fish and Wildlife Foundation (NFWF -Sierra Meadows Initiative) and Sierra Nevada Conservancy (SNC) have been used on federal lands and specially favor meadow restoration activities in their current grant guidelines. In addition to meadow restoration on federal land, many private landowners are requesting help to restore their meadows. This proposal estimates an investment of four million dollars over ten years on private lands to restore meadows. The Natural Resource Conservation Service has been investing in meadows and plans to continue this investment, most notably through their Wetland Reserve Program, as do NFWF and SNC. The Fall River RCD has also been leading efforts for streambank enhancement and meadow restoration within the region. The Burney Gardens Restoration project within the Basins project area is an example of these efforts. The success of the Burney-Hat Creek Collaborative is bringing restoration funding into the project area.

Lassen National Forest staff is working with Lassen Volcanic National Park (LVNP) staff regarding forest health and planned treatments on national park lands. The majority of the park's planning units are on the north end of the park high in the Hat Creek watershed. This makes the park's treatment planning important to coordinate with the Burney-Hat Creek Basins Project. Having LVNP as a member of the Burney-Hat Creek Community Forest and Watershed Group is greatly beneficial to the overall planning of the Basins Project. If park funding requests are fruitful, there could be approximately \$80,000 of Department of the Interior funds available to LVNP in both 2011 and 2012 for implementation.

Timber sale receipts from the Burney-Hat Creek Basins Project will be used to restore healthier ecological conditions on the landscape. However, those receipts are not sufficient to conduct all the needed restoration work. The CFLRP funding will help fill the financial deficit necessary to remove biomass, restore degraded habitats, treat heavy fuels build up, improve forest health and vigor, and move the landscape toward a healthy, safe and naturally functioning condition. In addition to addressing those treatment needs, CFLRP funds will provide for essential monitoring, of which little can be funded otherwise. There remain project funding needs beyond the CFLRP request. The Burney-Hat Creek Community Forest and Watershed Group is strongly committed to pursuing funding for additional restoration work on the landscape. Certainly there are many benefits to the Basins Project and the CFLRP funds will make a substantial difference for the Burney-Hat Creek Basins landscape and area residents. Nearly 35 percent of national forest lands in the project area will be treated and 28 percent of all lands across the landscape. Modeling demonstrates that such significant improvement to the vegetation will result in a 37 percent reduction in burn probability across the landscape leading to an estimated fire suppression cost savings of over \$11 million dollars. The Burney-Hat Creek Basins Project is very well poised to become a noteworthy success.

Attachment A

Projected Accomplishments Table

Performance Measure	Code	Number of units to be treated over 10 years using CFLR funds	Number of units to be treated over 10 years using other FS funds	Number of units to be treated over 10 years using Partner Funds ²	CFLR funds to be used over 10 years	Other FS funds to be used over 10 years ³	Partner funds to be used over 10 years
Acres treated annually to sustain or restore watershed function and resilience	WTRSHD-RSTR-ANN	325	55	15	211,250	650,000	55,000
Acres of forest vegetation established	FOR-VEG-EST	0	3,450	0	0	862,500	0
Acres of forest vegetation improved	FOR-VEG-IMP	35,817	69,239	1,450	9,638,379	9,486,834 + sawlogs	339,000
Manage noxious weeds and invasive plants	INVPLT-NXWD-FED-AC	0	45	0	0	145,000	0
Highest priority acres treated for invasive terrestrial and aquatic species on NFS lands	INVSPE-TERR-FED-AC	0	0	0	0	0	0
Acres of water or soil resources protected, maintained or improved to achieve desired watershed conditions.	S&W-RSRC-IMP	35,817	69,239	1,450	9,638,379	9,486,834 + sawlogs	339,000
Acres of lake habitat restored or enhanced	HBT-ENH-LAK	0	22	0	0	120,000	0

² These values should reflect only units treated on National Forest System Land

³ **Matching Contributions:** The CFLR Fund may be used to pay for up to 50 percent of the cost of carrying out and monitoring ecological restoration treatments on National Forest System (NFS) lands. The following BLI's have been identified as appropriate for use as matching funds to meet the required minimum 50% match of non-CFLR funds: ARRA, BDBD, CMEX, CMII, CMLG, CMRD, CMTL, CWFS, CWKV, CWK2, NFEX, NFLM (Boundary), NFMG (ECAP/AML), NFN3, NFTM, NFWW, NFWF, PEPE, RBRB, RTRT, SFSF, SPFH, SPEX, SPS4, SSCC, SRS2, VCNP, VCVC, WFEX, WFW3, WFHF.

The following BLI's have been identified as **NOT** appropriate for use as matching funds to meet the required minimum 50% match of non-CFLR funds: ACAC, CWF2, EXEX, EXSL, EXSC, FDFD, FDRF, FRRE, LALW, LBLB, LBTW, LGCY, NFIM, NFLE, NFLM (non-boundary), NFMG (non-ECAP), NFPN, NFRG, NFRW, POOL, QMQM, RIRI, SMSM, SPCF, SPCH, SPIA, SPIF, SPS2, SPS3, SPS5, SPST, SPUF, SPVF, TPBP, TPTP, URUR, WFPR, WFSU.

Performance Measure	Code	Number of units to be treated over 10 years using CFLR funds	Number of units to be treated over 10 years using other FS funds	Number of units to be treated over 10 years using Partner Funds ²	CFLR funds to be used over 10 years	Other FS funds to be used over 10 years ³	Partner funds to be used over 10 years
Miles of stream habitat restored or enhanced	HBT-ENH-STRM	21	21	2	211,250	650,000	55,000
Acres of terrestrial habitat restored or enhanced	HBT-ENH-TERR	35,817	69,239	1,450	9,638,379	9,486,834 + sawlogs	339,000
Acres of rangeland vegetation improved	RG-VEG-IMP	600	2,500	0	180,000	360,000	0
Miles of high clearance system roads receiving maintenance	RD-HC-MAIN	0	38	0	0	180,000	0
Miles of passenger car system roads receiving maintenance	RD-PC-MAINT	0	52	0	0	247,000	0
Miles of road decommissioned	RD-DECOM	17	22	0	170,000	435,000	15,000
Miles of passenger car system roads improved	RD-PC-IMP	0	0	0	0	0	0
Miles of high clearance system road improved	RD-HC-IMP	0	2	0	0	20,000	0
Number of stream crossings constructed or reconstructed to provide for aquatic organism passage	STRM-CROS-MTG-STD	0	4	0	0	540,000	540,000
Miles of system trail maintained to standard	TL-MAINT-STD	0	36	14	0	112,000	26,000
Miles of system trail improved to standard	TL-IMP-STD	0	1	1	0	8,000	8,000
Miles of property line marked/maintained to standard	LND-BL-MRK-MAINT	0	18	0	0	18,000	0
Acres of forestlands treated using timber sales	TMBR-SALES-TRT-AC	0	23,400	0	0	9,486,834 + sawlogs	0

Attachment B

Proposal Name: Basins

Start Year	2011
End Year	2019
Total Treatment Acres	69,239.00
Average Treatment Duration	15
Discounted Anticipated Cost Savings - No Beneficial Use	\$11,094,236
Discounted Anticipated Cost Savings - Low Beneficial Use	\$11,688,869
Discounted Anticipated Cost Savings - Moderate Beneficial Use	\$11,688,869
Discounted Anticipated Cost Savings - High Beneficial Use	\$11,688,869

Attachment B continued

Proposal Name: Basins	Documentation Page
This page is intended to help you record and communicate the assumptions and calculations that feed the risk and cost analysis tool package spreadsheet	Response / Information Column
Was the analysis prospective (projecting activities, costs and revenues that are planned by the proposal) or retrospective (using actual acres, revenues and costs in an analysis looking back over the life of the project)?	Prospective
Start year rationale:	2011 is the first year for proposal
End year rationale:	2019 is the final year for proposal. This is a large landscape and will take the full CFLR period to complete treatments with current workforce.
Duration of treatments rationale:	15 years is a combination of the treatment durations includes thinnings followed by Rx fire and mastication in brush.
All dollar amounts entered should reflect undiscounted or nominal costs , as they are discounted automatically for you in the R-CAT spreadsheet tool? Did you provide undiscounted costs, and in what year data are your costs and revenues provided.	Costs are undiscounted. The year for cost is 2011.
Average treatment cost per acre rationale:	This cost is a combination of projected costs on the landscape in forested areas that would require thinning, fuels treatment, Rx fire, or pile burn and brush areas that would require mastication and follow up burn in some cases.
Rationale for actual costs per acre of treatment by year is used:	Treatments were done on timeline with anticipated outputs. Costs are reflective of work at the scale shown.
Average treatment revenue per acre rationale:	Using today's values for sawlog timber and biomass chips the value of material or revenue generated was estimated from thinnings.
This tool is intended to be used to estimate Forest Service fire program costs only , did you conduct your analysis this way or have you taken an all lands approach?	This was a look at the Forest Service fire program costs only

Total treatment acres calculations, assumptions:	The numbers are based on assumptions of getting the CFLR funding associated with the activity treatments. Treatments are based on current data from sales and activities inside this landscape on NFS lands.
Treatment timing rationale with NEPA analysis considerations:	Treatments are set-up following NEPA analysis timelines. An activity schedule that follows the NEPA process was created to help clearly populate the CFLR proposal
Annual Fire Season Suppression Cost Estimate Pre Treatment, Assumptions and Calculations	Average cost on the district and forest during the last five years on large fires like Sugarloaf fire 10,000 acres and 10,000,000 dollars equals 1,000 dollars per acre
Did you use basic Landfire Data for you Pretreatment Landscape?	We used the California Fuels Landscape (updated 08/27/2010) developed by the Pacific Strategic Support Cadre.
Did you modify Landfire data to portray the pretreatment landscape and fuel models?	We used the California Fuels Landscape (updated 08/27/2010) developed by the Pacific Strategic Support Cadre. Since this dataset is updated yearly we did not modify it.
Did you use ArcFuels to help you plan fuel treatments?	No
Did you use other modeling to help plan fuel treatments, if so which modeling?	We used the Landscaped Editor function in the Wildland Fire Decision Support System (WFDSS) to simulate the treatment prescriptions, then the Fire Spread Probability model in WFDSS to test the post treatment landscape and derive the percent reduction of the probable area burn. The analysis used 7 days for the duration of the 256 fire simulations under average Energy Component (ERC) for August 15th. Data used was the 082710 version of the California Fuels Landscape (.LCP) at 90 meter resolution. Ignition files used were points on a 5,000 meter grid within the project boundary. Analyst: Phil Bowden
Did you model fire season costs with the Large Fire Simulator?	Because of time constraints we did not.
If, so who helped you with this modeling?	Phil Bowden - R5
If not, how did you estimate costs, provide details here:	
Did you apply the stratified cost index (SCI) to your Fsim results?	
Who helped you apply SCI to your FSIM results?	
Did you filter to remove Fsim fires smaller than 300acres and larger than a reasonable threshold?	
What is the upper threshold you used?	
Did you use median pre treatment costs per fire season?	
Did you use median post treatment costs per fire season?	
Did you test the statistical difference of the fire season cost distributions using a univariate test?	

What were the results?	
Did you estimate Burned Area Emergency Response (BAER) costs in you analysis?	Yes
Did you use H codes or some other approach to estimate these costs?	We looked at previous large fires and typical BAER rates compared to total suppression costs.
Did these cost change between pre and post treatment?	Cost stayed the same but the acres treated went down due to treatment.
Did you estimate long term rehabilitation and reforestation costs in your analysis?	Yes
How did you develop these estimates, and did these cost change between pre and post treatment?	Rehab costs were taken from other large fires on the forest. Reforestation costs were also estimated from recent fires.
Did you include small fire cost estimates in your analysis?	Yes
If so, how did you estimate these costs, what time period is used as a reference, and did these cost change between pre and post treatment?	FMO on the district came up with 5 year average small fire response applied to landscape with average cost per acre.
Did you include beneficial use fire as a cost savings mechanism in your analysis?	Yes
How did you estimate the percent of contiguous area where monitoring is an option for pretreatment landscape?	Thousand Lake Wilderness inside the landscape.
How did you estimate the percent of contiguous area where monitoring is an option for post treatment landscape, and why did you select the percentage of your landscape for low, moderate and high?	If all the treatments are completed the district could then begin to implement fire use in the Wilderness. Current conditions don't allow this to happen. In addition portions around the wilderness and on Burney Mt. and adjacent to the National Park were also put under the category of moderate
How did you derive an estimate for the percentage of full suppression costs used in fire monitoring for beneficial use?	Visited with other National Forests on monitoring costs versus suppression with TEAM. Klamath, Deschutes.
Did you ensure that you clicked on all the calculation buttons in cells in column E after entering your estimates?	Yes
Did you make any additional modifications that should be documented?	The total landscape includes a large portion of private land that wasn't modeled in this exercise. These lands are in good condition for fire/fuels compared with most national forests in the west because of the active management. The combined landscape effect would be even more powerful if combined with these lands.

Attachment C

Members of the Collaborative:

Organization Name	Contact Name	Phone Number	Role in Collaborative ⁴
Burney Fire Department	Ray Barber	530-335-2212	Member, local fire department
Lassen National Forest, Forest Supervisor	Jerry Bird	530-257-2151	Member, federal agency
Hat Creek Valley Fire Safe Council	Don Curtis	530-335-7041	Member, fire safe council
Clearwater Lodge	Bill Downs	530-336-5005	Member, fishing/recreation
Fruit Growers Supply Company	John Eacker	530-335-2882	Member, landowner/forestry
Hat Creek Grown, LLC (ranch owner)	Pam Giacomini	530-335-7016	Member, ranching/farming
W.M. Beaty & Assoc., Inc.	Pete Johnson	530-335-2881	Member, land manager/forestry
Stewardship Council	Chantz Joyce	530-524-9563	Member, Land Trust agency
Sierra Institute for Community and Environment	Jonathan Kusel	530-284-1022	Facilitator, science support
Lassen National Forest, District Ranger	Kit Mullen	530-335-5521	Member, federal agency
Franklin Logging	Bruce Olsen	530-549-4924	Member, forest industry
Lassen Forest Preservation Group	Patricia Puterbaugh	530-342-1641	Member, environmental group
Fall River Resource Conservation District	Todd Sloat	530-336-5456	Facilitator, science support
Lassen National Forest, Silviculturalist	Matt Staudacher	530-335-5521	Technical support, federal agency
Pit River Tribe	Sophia Villarruel	530-335-1118	Member, Tribal
Warner Enterprises, Inc.	Gary Warner	530-241-4000	Member, forest industry
Pacific Gas and Electric Company	Steve Yonge	530-246-6547	Member, landowner forestry/hydropower
Lassen Volcanic National Park	Janet Coles	530-595-6180	Member, federal agency

⁴ Responses to this category should reflect the role the entity plays in the collaborative process, the interests they represent and/or any other function they serve in the collaborative. Responses could include descriptions such as “proposal author”, “Will participate in monitoring”, etc. If the collaborative member participated specifically in the development of this proposal, please be clear about what their participation in developing the proposal was.

Burney/Hat Creek Community Forest and Watershed Group

The Burney-Hat Creek Community Forest and Watershed Group has participated in the development of the Collaborative Forest Landscape Restoration plan submitted.

We are excited about the scope of work, its potential to reduce the risk of catastrophic wildfire, and improve landscape health and resilience, wildlife habitat, and community socioeconomic conditions.

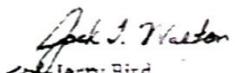
We are committed to continuing to work with the Forest Service, other agencies, the Pit River Tribe, private land managers and other participating partners to implement this landscape-level approach to improving the health of our communities and the restoration and resilience of the landscape.



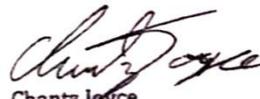
Ray Barber
Chief, Burney Fire
Department

Peter D. Johnson
W.M. Beaty & Associates,
Inc.

Patricia Puterbaugh
Lassen Forest Preservation
Group



Jerry Bird
Supervisor
Lassen National Forest

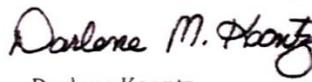


Chantz Joyce
Stewardship Council

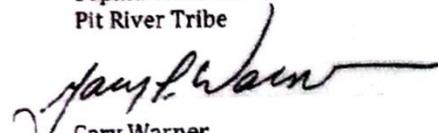


Sophia Villarruel
Sophia Villarruel
Pit River Tribe

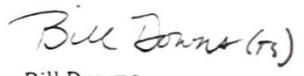
Don Curtis
Hat Creek Valley Fire Safe
Council



Darlene Koontz
Superintendent, Lassen
Volcanic National Park



Gary Warner
Warner Enterprise



Bill Downs
Clearwater Lodge, Fishing
Guide

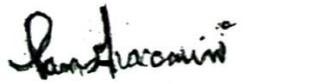


John Eacker
Fruit Growers Supply
Company



Steve Yonge
Pacific Gas & Electric

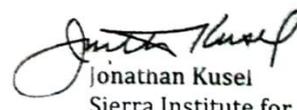
Facilitators:



Pam Giacomini
Partner, Hat Creek Grown,
LLC, (ranch owner)

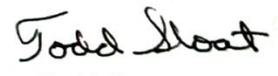


Kit Mullen
Hat Creek District District
Ranger,
Lassen National Forest



Jonathan Kusel
Sierra Institute for
Community and
Environment

Bruce Olsen
Franklin Logging



Todd Sloat
Fall River Resource
Conservation District

Attachment E

	Employment (# Part and Full-time Jobs)			Labor Inc (2010 \$)		
	Direct	Indirect and Induced	Total	Direct	Indirect and Induced	Total
Thinning-Biomass: Commercial Forest Products						
Logging	53.8	64.1	117.9	2,622,843	3,251,298	5,874,140
Sawmills	24.4	46.8	71.2	1,324,246	2,054,123	3,378,369
Plywood and Veneer Softwood	-	-	-	-	-	-
Plywood and Veneer Hardwood	-	-	-	-	-	-
Oriented Strand Board (OSB)	-	-	-	-	-	-
Mills Processing Roundwood Pulp Wood	-	-	-	-	-	-
Other Timber Products	0.4	0.5	0.9	16,263	22,476	38,738
Facilities Processing Residue From Sawmills	4.9	11.2	16.1	370,789	558,523	929,312
Facilities Processing Residue From Plywood/Veneer	-	-	-	-	-	-
Biomass--Cogen	3.2	2.1	5.3	296,405	160,563	456,969
Total Commercial Forest Products	86.7	124.7	211.4	4,630,545	6,046,984	10,677,529
Other Project Activities						
Facilities, Watershed, Roads and Trails	0.4	0.3	0.7	27,290.0	14,795.1	42,085.1
Abandoned Mine Lands	0.0	0.0	0.0	0.0	0.0	0.0
Ecosystem Restoration, Hazardous Fuels, and Forest Health	1.2	0.3	1.5	52,946.9	13,795.7	66,742.5
Commercial Firewood	1.8	0.4	2.2	33,790.8	20,549.4	54,340.2
Contracted Monitoring	0.6	0.5	1.1	40,260.0	28,730.8	68,990.9
Total Other Project Activities	4.1	1.4	5.5	154,288	77,871	232,159
FS Implementation and Monitoring	2.2	0.6	2.8	66,245	28,650	94,895
Total Other Project Activities & Monitoring	6.3	2.0	8.3	\$220,533	\$106,521	\$327,054
Total All Impacts	93.0	126.7	219.7	\$4,851,077	\$6,153,505	\$11,004,582

Attachment F

(Copy table and provide the planned funding for each additional fiscal year). 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
1. FY 2011 Funding for Implementation	1,615,540
2. FY 2011 Funding for Monitoring	0
3. USFS Appropriated Funds	945,000
4. USFS Permanent & Trust Funds	148,520
5. Partnership Funds	0
6. Partnership In-Kind Services Value	23,020
7. Estimated Forest Product Value	99,000
8. Other (Meadow and Stream Enhancements benefiting NFS lands)	400,000
9. FY 2011 Total (total of 1-6 above for matching CFLRP request)	1,615,540
10. FY 2011 CFLRP request (must be equal to or less than above total)	604,629
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
11. USDI BLM Funds	0
12. USDI (other) Funds	80,000
13. Other Public Funding	0
Private Funding	0

(Copy table and provide the planned funding for each additional fiscal year). 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
1. FY 2012 Funding for Implementation	1,785,075
2. FY 2012 Funding for Monitoring	0
3. USFS Appropriated Funds	860,055
4. USFS Permanent & Trust Funds	52,000
5. Partnership Funds	100,000
6. Partnership In-Kind Services Value	23,020
7. Estimated Forest Product Value	350,000
8. Other (Meadow and Stream Enhancements benefiting NFS lands)	400,000
9. FY 2012 Total (total of 1-6 above for matching CFLRP request)	1,785,075
10. FY 2012 CFLRP request (must be equal to or less than above total)	1,254,598
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 20xx Funding Type	Dollars Planned
11. USDI BLM Funds	
12. USDI (other) Funds	80,000
13. Other Public Funding	
Private Funding	

(Copy table and provide the planned funding for each additional fiscal year). 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
1. FY 2013 Funding for Implementation	1,986,046
2. FY 2013 Funding for Monitoring	0
3. USFS Appropriated Funds	841,046
4. USFS Permanent & Trust Funds	365,000
5. Partnership Funds	200,00
6. Partnership In-Kind Services Value	25,000
7. Estimated Forest Product Value	355,000
8. Other (Meadow and Stream Enhancements benefiting NFS lands)	400,000
9. FY 2013 Total (total of 1-6 above for matching CFLRP request)	1,986,046
10. FY 2013 CFLRP request (must be equal to or less than above total)	940,950
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 20xx Funding Type	Dollars Planned
11. USDI BLM Funds	
12. USDI (other) Funds	
13. Other Public Funding	
Private Funding	

(Copy table and provide the planned funding for each additional fiscal year). 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
1. FY 2014 Funding for Implementation	1,897,046
2. FY 2014 Funding for Monitoring	0
3. USFS Appropriated Funds	852,046
4. USFS Permanent & Trust Funds	375,000
5. Partnership Funds	0
6. Partnership In-Kind Services Value	25,000
7. Estimated Forest Product Value	245,000
8. Other (Meadow and Stream Enhancements benefiting NFS lands)	400,000
9. FY 2014 Total (total of 1-6 above for matching CFLRP request)	1,897,046
10. FY 2014 CFLRP request (must be equal to or less than above total)	1,411,310
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 20xx Funding Type	Dollars Planned
11. USDI BLM Funds	
12. USDI (other) Funds	
13. Other Public Funding	
Private Funding	

(Copy table and provide the planned funding for each additional fiscal year). 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
1. FY 2015 Funding for Implementation	1,922,036
2. FY 2015 Funding for Monitoring	0
3. USFS Appropriated Funds	722,036
4. USFS Permanent & Trust Funds	425,000
5. Partnership Funds	0
6. Partnership In-Kind Services Value	25,000
7. Estimated Forest Product Value	350,000
8. Other (Meadow and Stream Enhancements benefiting NFS lands)	400,000
9. FY 2015 Total (total of 1-6 above for matching CFLRP request)	1,922,036
10. FY 2015 CFLRP request (must be equal to or less than above total)	1,704,761
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 20xx Funding Type	Dollars Planned
11. USDI BLM Funds	
12. USDI (other) Funds	
13. Other Public Funding	
Private Funding	

(Copy table and provide the planned funding for each additional fiscal year). 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
1. FY 2016 Funding for Implementation	1,732,328
2. FY 2016 Funding for Monitoring	0
3. USFS Appropriated Funds	537,328
4. USFS Permanent & Trust Funds	450,000
5. Partnership Funds	0
6. Partnership In-Kind Services Value	25,000
7. Estimated Forest Product Value	320,000
8. Other (Meadow and Stream Enhancements benefiting NFS lands)	400,000
9. FY 2016 Total (total of 1-6 above for matching CFLRP request)	1,732,328
10. FY 2016 CFLRP request (must be equal to or less than above total)	1,021,792
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 20xx Funding Type	Dollars Planned
11. USDI BLM Funds	
12. USDI (other) Funds	
13. Other Public Funding	
Private Funding	

(Copy table and provide the planned funding for each additional fiscal year). 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
1. FY 2017 Funding for Implementation	1,409,682
2. FY 2017 Funding for Monitoring	0
3. USFS Appropriated Funds	389,682
4. USFS Permanent & Trust Funds	375,000
5. Partnership Funds	0
6. Partnership In-Kind Services Value	25,000
7. Estimated Forest Product Value	220,000
8. Other (Meadow and Stream Enhancements benefiting NFS lands)	400,000
9. FY 2017 Total (total of 1-6 above for matching CFLRP request)	1,409,682
10. FY 2017 CFLRP request (must be equal to or less than above total)	976,385
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 20xx Funding Type	Dollars Planned
11. USDI BLM Funds	
12. USDI (other) Funds	
13. Other Public Funding	
Private Funding	

(Copy table and provide the planned funding for each additional fiscal year). 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
1. FY 2018 Funding for Implementation	2,406,745
2. FY 2018 Funding for Monitoring	0
3. USFS Appropriated Funds	571,745
4. USFS Permanent & Trust Funds	650,000
5. Partnership Funds	0
6. Partnership In-Kind Services Value	25,000
7. Estimated Forest Product Value	760,000
8. Other (Meadow and Stream Enhancements benefiting NFS lands)	400,000
9. FY 2018 Total (total of 1-6 above for matching CFLRP request)	2,406,745
10. FY 2018 CFLRP request (must be equal to or less than above total)	1,907,261
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 20xx Funding Type	Dollars Planned
11. USDI BLM Funds	
12. USDI (other) Funds	
13. Other Public Funding	
Private Funding	

(Copy table and provide the planned funding for each additional fiscal year). Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in FY 20xx to match funding from the Collaborative Forested Landscape Restoration Fund	
Fiscal Year 2019 Funding Type	Dollars/Value Planned
1. FY 2019 Funding for Implementation	1,702,376
2. FY 2019 Funding for Monitoring	0
3. USFS Appropriated Funds	377,376
4. USFS Permanent & Trust Funds	550,000
5. Partnership Funds	0
6. Partnership In-Kind Services Value	25,000
7. Estimated Forest Product Value	350,000
8. Other (Meadow and Stream Enhancements benefiting NFS lands)	400,000
9. FY 2019 Total (total of 1-6 above for matching CFLRP request)	1,702,376
10. FY 2019 CFLRP request (must be equal to or less than above total)	960,993
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 20xx Funding Type	Dollars Planned
11. USDI BLM Funds	
12. USDI (other) Funds	
13. Other Public Funding	
Private Funding	

