Colville National Forest

Collaborative Forest Landscape Restoration Program Proposal

Stevens and Ferry Counties, Washington

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Proposed Treatment

The Colville National Forest proposes a Collaborative Forest Landscape Restoration Program covering a landscape of over 900,000 acres (table 1). The landscape is comprised of the north-south trending Kettle Range and an adjacent wedge of land between the Kettle River and the Columbia River. The lower-middle to upper elevations of the Kettle Range and the northern half of the wedge are primarily administered by the Forest Service with private and State lands comprising the lowest elevations and areas adjacent to major rivers (see maps pages 23-26). The second largest land owner in the landscape is the Confederated Tribes of the Colville Reservation. Their reservation covers the southern portion of the Kettle Range from the San Poil River watershed to Lake Roosevelt. Canada forms the northern boundary.

Table 1. Distribution of ownership across the landscape

Ownership or Management	Acres
USFS	497,583
Tribal	147,620
BLM	9,870
WA State	43,560
Private	213,126
NPS	4,524
Total Acres	**916,283**

Simulation of landscape level fuel treatments indicate that optimal disruption of large fire spread requires treatment at a rate of 1-2 percent annually (Finney et al. 2007). Over the ten year proposal period, with matching funds, approximately 25 percent of the NFS lands in the landscape will be treated or allowed to burn in natural fire. With the proposal, fire suppression costs will decline by an estimated $10,000,000 per decade. Federal and non-Federal jobs are expected to increase by more than 450 jobs. Hydrologic systems and wildlife will benefit through a range of restoration projects (table 2). Risk of habitat loss due to severe wildfires will decline. Matching funds will be applied toward implementation of the Forest Minimum Road Strategy and deferred maintenance needs.

Current vegetation is influenced by past fires, fire suppression, homesteading, insect and diseases, mining and logging activity. The results are a homogeneous forested landscape susceptible to severe fire events. Trends in much of the landscape are toward denser forests of less fire tolerant species; conditions neither resilient nor resistant to disturbance. The Forest used an analysis of the area's historical range of variability for structural stage distribution as a coarse filter approach to determine restoration needs (see Ecological Context section). At the broad scale, restoration aims to move forests and associated grasslands, and shrublands toward their approximate historic distribution of structural stages. Emphasis will be given to restoring late/old forest structure and species composition; conditions considered resilient and resistant to disturbance, and rare on the Colville National Forest. Because climate change may influence how environments and species are distributed, the Forest will consider future range of variability, and use it in conjunction with other landscape tools like fire regime condition class.

Within the coarse filter of historic seral stage distribution, fire regime condition classes (FRCCs) provide additional direction for restoration activities (see Wildfire section). Based on planning area analyses (25,000 or more acres), the landscape is in FRCC 2, bordering on FRCC 3; a moderate to high deviation from its natural fire regime. Deviation becomes greater at mid and lower elevations where forests are more homogenous, younger on average, and denser than historically occurred. Treatments will focus on areas that deviate from their natural fire regimes, particularly where these conditions occur near the wildland/urban interface (WUI) or critical egress routes. Treatments will help restore forests to their natural fire regimes while enhancing their ability to develop into fire resistant and resilient late/old structure. Maintenance treatments will be used where desired conditions prevail.

Due to climate change, fire is expected to become more frequent, with longer snow free periods. Moving forests toward a more natural fire regime is the first step in managing for this change.

Riparian areas often act as refugia and will be protected through restoration of adjacent uplands and judicious application of fuel treatments within them. Hydrologic resources will benefit from the Forest's implementation of the Regional Minimum Road Strategy, and a variety of stream and wetland restoration projects. Where projects fall within the Sanpoil Watershed Analysis Plan (in process), this document will help set priorities.

Within the landscape there are fifteen projects for which the NEPA process is complete (first five items listed below). They are either awaiting implementation or are active. Though not developed under the CNF Restoration Strategy, these projects all contain forest and aquatic restoration components like road decommissioning, underburning, and ladder fuel reduction that the matching funds would help implement.

- **(3)** Healthy Forest Initiative projects requiring implementation funds for restoration fuels treatments
- **(2)** Fuel reduction and forest restoration projects under contract
- **(1)** Fuel reduction and forest restoration project in preparation for stewardship contract FY10
- **(5)** Fish barrier removals and watershed improvement projects require implementation funds
- **(4)** Fencing exclosures to protect wetlands (20 acres) require implementation funds
- **(4)** Fuel reduction and forest restoration projects for which the NEPA process has begun
- **(11)** Additional projects included on the Forest's ten-year action plan

Fire regime and stand structure restoration practices include a variety of ladder and surface fuel reduction treatments like thinning from below, whip falling, mastication, lop and scatter, underburning, and biomass removal. Biomass removal often accompanies commercial harvest employing whole tree logging. Hydrologic restoration includes modifications to the Forest transportation system such as with culvert replacements or road decommissioning as well as relocation of dispersed campsites and modifications to range allotment management.

The landscape has received restoration activity on all ownerships over the last five years. For example, about 9,000 acres of dry biophysical environments (warm, dry Douglas-fir and ponderosa pine) were underburned on NFS and National Park Service land. Eighteen culverts were replaced on private and Federal lands to restore fish passage and reduce sedimentation during flood events, partially with State matching funds.

Restoration between 2005 and 2010 in the proposal area
✓ 9,000 acres prescribed fire
✓ 1 water impoundment removal
✓ 18 culverts replaced
✓ 3,650 acres ladder fuel treatments
✓ 5 acres of stream restoration

The Forest will employ a range of methods to complete the proposed work (table 2). Timber sale stewardship contracting will be the method of choice both to generate the maximum timber receipts for restoration activities and to provide the greatest funds for local contracting. Appropriated funds would be the primary source for the base program of work, administrative and support costs, and other inherently governmental activities such contract administration, and prescribe burning. We will rely on service contracting for much of the other work. Grants and Agreements will also be used to leverage additional funds and activities like we have with the Rocky Mountain Elk Foundation (prescribed burning) and the Air Force (Growden Dam removal).

Displayed in table 2 is a list of work predicted to be accomplished with the CFLRP matching grant dollars. It also shows the amount of work likely to be conducted over the same 10 year period without additional funding.

Table 2. Restoration activities projected to be accomplished between 2010 and 2019 if Proposal funding is granted to the Colville National Forest

Objectives	Restoration Activity with fully funded proposal (2010-2019)*	Without matching funds
Protect private property, Restore structural stage distributions to historic range of variability, Restore natural fire regime	Commercially harvest 42,000 acres	12,259 acres
	Pre-Commercial Thin 27,400 acres	13,700 acres
	Reduce fuels on 58,250 acres	29,110 acres
	Underburn 35,700 acres	17,966 acres
Conserve local genetic material	Collect seed from 2,000 selected trees including species affected by non-native diseases.	500 trees
Restore watershed function, stream stability, water quality, and aquatic habitat	Identify a minimum road system in project areas	Same
	Stabilize 12 miles of stream bank	6 miles
	Stabilize 8 miles of stream (in-stream projects)	4 miles
	Restore/protect 520 acres of wetland	300 acres
	Reconstruct 3 bridges to reduce sediment to creeks	0 bridges
	Remove 2 impoundments to reestablish fish passage	Same
	Build 9 miles of fence to protect wetlands	4 miles
	Install 2 cattle guards to protect riparian areas	Same
	Replace 37 culverts to reestablish fish passage	18 culverts
	Complete deferred maintenance 125 miles of forest rd	63 miles
	Decommission about 36 miles of road	12 miles
	Develop 3 rock pits	Same
	Survey, maintain, relocate as needed 1,950 miles of trail	825 miles
	Install 20 erosion control drainage devices	12 devices
Restore native vegetation by treatment and prevention of invasive plants	Survey 10,000 acres for noxious weeds, treat as needed	5,000 acres
	Develop non-palatable seed mix for local riparian use	Same
Restore upland wildlife habitat	Install 11 bat friendly cave closures	5 closures
	Improve 35,000 acres ungulate habitat	18,000 acres
	Improve 10,000 acres lynx habitat	10,000 acres

*Some restoration activities may overlap.

Work on NFS land is supported by active or proposed treatment on about 17,000 acres of adjacent lands under Tribal, State and private ownership or administration. Due to planning cycles, not all acres on adjacent lands are included in this number. For example, the Confederated Tribes of the Colville Reservation propose to treat about 7,000 acres known to be within the landscape in the next 3 years, but 6,400 acres annually across the Reservation, some of which may also overlap (Colville Reservation's Plan for Integrated Resource Management). Timber growing, harvesting, and processing have been major sources of income for the Colville Tribes and their members.

Washington State developed a Strategic Plan for Healthy Forests, (December 30, 2004). It provides a vision for forested lands on all ownerships: (1) Forested landscapes across the State are resistant to uncharacteristically, economically, or environmentally undesirable wildfires, windstorms, outbreaks of pests and diseases, and other damaging agents, and (2) Forests are resilient and able to recover following such disturbance. Achieving this vision is a shared responsibility between public and private landowners. This principle is manifest as Community Wildfire Protection Plans, and a matching grant program to promote the State's vision on State and private lands.

Between 2010 and 2019 restoration is proposed on:
✓ 120,000+ acres of NFS land
✓ 7,325 acres of private land
✓ 600 acres of other Federal land
By 2013 restoration is proposed on:
✓ 7,000 acres of BIA Tribal land
✓ 2,060 acres of WA State land

Community Wildfire Protection Plans covering the proposal area are completed for Ferry and Stevens Counties. Identified treatments from the plans are being implemented on all ownerships of the landscape. For example, the Forest has completed or is in process of completing NEPA on six Healthy Forest Restoration projects incorporating these documents. Progress on State and private lands is being made through the matching grant program with an estimated 7,325 acres of private land predicted for fuel reduction treatments in the next decade.

A similar matching grant program exists for restoring stream connectivity. The Pacific NW Region (Region 6) and Washington State have a MOU (1999) for meeting responsibly under Federal and State water quality laws. In addition listing impaired waters, it states that "both agencies recognize the need to repair existing fish passage problems at road crossings and commit to assessing needs and implementing remediation of passage problems." The MOU demonstrates a collaborated effort to restore aquatic systems and protect Federally listed and Region 6 sensitive species. Washington State has funded a Family Forest Fish Passage cost share program to assist small landowners in complying with the fish barrier specifications. State and private land managers under this program have removed 15 fish barriers in the project area.

Monitoring is an important part of the Forest's program of work. The effects of roads and treatments on hydrology, wildlife, and other values specified in the Forest Plan will continue to be monitored in addition to the following: (1) monitoring called for in the Washington State Forest Health and Fire Protection Strategies, (2) State water quality monitoring, (3) third party monitoring by the collaborative group Northeast Washington Forestry Coalition (NEWFC), (4) snow course surveys by NRCS, and (5) insect and disease flights and site visits by the Wenatchee and West side Insect and Disease Service Centers. A learning plan and expanded monitoring, in association with the Pacific Northwest Science Delivery and Adoption Program, will be considered and supported by CFLRP funding (see Landscape Strategy).

Third party monitoring of project implementation and effects is considered by the Forest and its primary collaborative group, NEWFC, an effective tool to generate public trust in the restoration process and agency. Third-party monitoring is expected to be funded from Title II dollars as it has in the past. Matching funds from this proposal will be used to expand the monitoring program, including third- party monitoring within the landscape.

Ecological Context

Vegetation - Current vegetation is influenced by past fires, fire suppression, homesteading, insect and diseases, mining and logging activity. More than 40% of the landscape was burned by wildfires between 1910 and 1934. These events created some diversity between stands, but overall, the landscape has become homogeneous. Forests today are primarily two storied to multi-storied. Extreme competition for water, light, and nutrients characterizes growing conditions. There has been a general trend toward a dense understory of shade tolerant tree species and a preponderance of dense overstories. Increases in tree density and shade tolerant species have increased insect and disease activity and risk. In much of the landscape, former park-like forest has become closed supporting a dense understory of small trees. Areas that fire maintained as shrub or grasslands are being invaded by conifers. Wildfires today, with current stand conditions tend to burn with uncharacteristic amounts of high severity.

Managing within an area's historical range of variability for seral stage distribution is a course filter approach to maintain ecosystem sustainability and resiliency (Agee 2003). The historical range of variability (HRV) was developed by a team from the Colville and Okanogan National Forests based on pre-EuroAmercian settlement era conditions for potential natural vegetation (Berube and Kovalchick 1995). Biophysical environments (BEs) represent potential natural vegetation types grouped under similar historic fire regimes (table 3). As previously mentioned, the Forest recognizes that climate change may alter distribution of BEs on the landscape.

Table 3. Distribution of forested biophysical environments and their fire regimes across the proposal area

Biophysical Environment (BE)	Elevation	Percent of Landscape	Fire Regime
Warm, Dry Douglas-fir, Ponderosa Pine	low-mid	60	I
Cool, Mesic Douglas-fir-Grand fir	mid	12	III
Cool, Mesic Western Red Cedar- Hemlock	mid	9	III
Cold, Dry or Mesic Alpine Fir	high	13	III, IV
Englemann Spruce-Alpine Fir Bottoms	mid-high	6	IV

Using Forest-wide GIS layers as well as project level analyses, the landscape's BEs and seral stages were analyzed and compared to the area's HRV. Results show that upper elevation BEs where stand replacement fires continue to dominate have higher amounts of early structural stages and lower amounts of late/old structure than historical conditions. Weather and topography generally maintain the BEs within or near their historic fire regime (fire regime condition classes 1 and 2, see Wildfire section below for FRCC). Treatments will focus on maintenance of these conditions, rebalancing structural stages toward HRV, and retarding their movement to fire regime condition class 3.

Lower and middle elevations dominated by Douglas-fir, grand fir, and western red-cedar have historic fire regimes of high frequency, low severity (60%) and mixed severity (25%) fires. These BEs are within HRV for post-disturbance, early structure, but above HRV for the middle sized structure like "understory re-initiation" and "young forest multistory" conditions. Comprising nearly 40% of the landscape, most of the middle sized structure forest falls into stand level FRCC 2 and 3, having missed one to several fire events. Stand level treatments will

focus on retarding or reversing the current progression of these forests toward FRCC 3 while enhancing the forest's ability to reach target late/old structure conditions.

The current amount of late/old structure is generally less than the HRV for low and middle elevation forests, with one exception, closed canopy, dry Douglas-fir BE. At middle and low elevations fire suppression allowed growth of understory trees and eliminated fire as a natural thinning agent. This created an artificial imbalance between the two late/old conditions (table 4). Treatments will focus on converting a portion of the multilayered/closed condition to a fire resistant and resilient open late/old condition. They will favor fire tolerant early seral species and large trees. No loss of late/old structure would occur.

Table 4. Distribution of dry Douglas-fir late/old structure, percent of BE

Close/multi-storied		**Open**	
Historic	Existing	Historic	Existing
5-20%	18%	30-75%	2%

Restoration will provide a mosaic of forest stands that more closely resemble sustainable conditions resilient to disturbances including fire. Understory, ladder, and surface fuels would be reduced to improve the survival of large trees from both prescribed fires and wildfires. Tree species management will offset climate change impacts by shifting species composition upward in elevation and maintaining forest cover in the lower elevations. Competition or drought caused mortality and risk of disease and epidemic insect populations will be reduced in drier forests. Existing genetic conservation strategies will continue such as maintaining blister rust resistant whitebark pine and western white pine through seed collection, storage, select tree, breeding programs, and seed orchard maintenance.

Wildlife - The landscape provides suitable habitat conditions for 11 of the 13 terrestrial Management Indicator Species identified in the current Forest Plan. Habitats in this area have been degraded over time due to fire suppression, insect and disease outbreaks, and increasing road densities. Of particular concern is habitat for Canada lynx, (Federally listed threatened) tied to early seral moderate and high elevation BEs. Treatments will favor lynx by maintaining the balance of early structure distribution within HRV and allowing for management toward multiple objectives, like habitat, during a fire event. Ungulate species will benefit as well. Restoring open forest structure will improve forage to cover ratios for ungulate species particularly in key winter range areas. Matching funds would be used to improve forage quality and quantity by conducting ladder fuel reduction, prescribed burning, and noxious weed treatments. Reductions in open road densities will provide better habitat security and seclusion. Important fawning areas and summer habitat will be improved through treatments within riparian areas, openings, meadows, and aspen and other deciduous habitats.

Fisheries - The landscape provides core habitat for two Region 6 sensitive species; redband trout and westslope cutthroat trout. Federally listed threatened Bull trout are in the Kettle River and Columbia River within the landscape but off NFS land. These populations are put at risk due to the aquatic impacts from roads and trails, cattle, uncharacteristic wildfire, and human activities like illegal Off Highway Vehicle (OHV) use and water impoundments.

Restoration will focus on reducing sedimentation and restoring riparian ecosystem function including resilience to flood events. Plans are to improve instream habitat features and stability by placing large woody debris and boulders to create pools and stabilize stream banks. Bank and riparian damage will recover as cattle and OHV access to riparian areas and sensitive soils are reduced. Fish will have greater access to streams as barriers to fish passage like undersized culverts are removed or replaced. Reconstruction or decommissioning riparian and other roads

will reduce the amount of sediment they contribute to streams and improve resistance and resilience to flood events. We will work with the public to restore or modify recreation areas to reduce their negative impacts on streams. Judicious thinning and use of prescribed fire in riparian areas will increase the growth and vigor of riparian trees for future large woody debris recruitment. Riparian BEs are typically refugia where late/old structure is within HRV. Though the amount of young structural condition is often below HRV in riparian areas, treatments in adjacent uplands will protect them during severe fire events.

Colville National Forest stream bank stability

Hydrology – Ninety-two percent (1,540 miles) of roads within the landscape are part of the NF road system. Of these, 230 miles either lie within or cross riparian areas. Additionally, a well established and utilized trail system exists, totaling almost two hundred miles in length. Approximately 20% of the trail system is open to motorized use. Matching funds would be used to address hydrologic restoration concerns on these trails and roads.

The area contains several water bodies categorized by Washington State Department of Ecology (WADOE) for one or more impairments; dissolved oxygen, temperature, pH, and fecal coliform. Restoration treatments will adhere to the Total Maximum Daily Load requirements for these water bodies, and foster positive action towards their improvement. Improving the hydrology in the area follows much the same process for improving fish habitat. Treatments are designed to reduce sedimentation, improve stream bank stability, restore stream and riparian function, improve water quality, and reconnect floodplains. Additionally plans are to decrease livestock and OHV access to streams, develop off-stream livestock watering sources, and remove unauthorized riparian roads and trails. As per the Minimum Road Strategy, reducing erosion and sedimentation to the hydrologic system will be addressed through relocating, reconstructing, or decommissioning roads and trails; with emphasis on those located in riparian areas. There is one municipal water supply in the landscape; restoration will aid in maintaining its water quality.

Non-Native Invasive Species – The Forest uses an integrated approach in managing invasive species which includes prevention measures, inventory, treatment, and monitoring. The Forest Collaborates with the Tri-County Weed Board, and coordinates activities with county, State and other Federal agencies on target species like milfoil and the New Zealand mud snail. The program adheres to the Pacific Northwest Region (R6) programmatic Environmental Impact Statement (EIS) titled *Preventing and Managing Invasive Plants* and follows the Forest's noxious weed prevention guidelines. Increasing resilience of ecosystems will increase their ability to resist invasion and establishment of non-native species. Where treatments disturb soil, reseeding would occur. To this end, the Forest collaborated with the Washington Department of Transportation to develop native and non-invasive seed mixes appropriate for road side use. Matching funds would be used in part to develop a seed mix appropriate for riparian use that is not attractive to livestock.

Collaboration

The primary group with which the Forest collaborates is the Northeast Washington Forestry Coalition (NEWFC) a 501.(c)3 organization. NEWFC is comprised predominantly of conservation groups and wood products firms, including representation from the Society of American Foresters and the American Forest Resource Council. NEWFC and its constituents collaborated extensively on development of this CFLRP proposal including providing research, drafting sections, and suggesting edits to the document. A letter of support from the NEWFC can be found in Appendix B along with letters from Congresswoman Cathy McMorris Rodgers, and the Washington State Department of Natural Resources.

Most recently, a congressionally sponsored "round table" added groups to the collaborative process that did not previously participate. The Confederated Tribes of the Colville Reservation are one of the more active newly represented groups. They participate cooperatively around management of lands adjacent to their ownership. For the CFLRP proposal the Colville Confederated Tribes contributed with restoration activities along our mutual boundary. Management concerns include maintaining tribal hunting rights, medicinal plants, gathering opportunities, and other cultural resources as designated by Treaty. Other stake holders represented at the “roundtable” included county commissioners, ranchers, and local recreation users.

The Forest has an MOU with NEWFC and a stepwise strategy for interaction regarding project level work. NEWFC is governed by a Board of Directors with an Executive Director and operates with a consensus-based decision making process. The Executive Committee and various subcommittees make recommendations to the Board for consideration; approval requires full consensus. Consensus decision making assures equal representation of all stakeholders. The Executive Board meets with the Forest bimonthly, more often as necessary. Subgroups may meet with Forest planners and team members on a more frequent basis to address a given project.

At this point, NEWFC does not anticipate the collaborative group becoming a legal FACA organization. The majority of the members are local stakeholders with participation from non-local entities and individuals. They believe the local grassroots group is free from many of the positional considerations that must follow regional or national entities. Board members regularly participate in regional forest collaborative groups of the Kootenai and Idaho Panhandle National Forest. The experiences of NEWFC, its processes, guidance, and protocols have significantly influenced these collaboratives and others across the west. To that end, NEWFC has produced a 25 minute video "*From Controversy to Common Ground: The Colville National Forest Story*." During the spring of 2010, the film was shown to 175 members of the public in the Tri-County area (Stevens, Ferry, and Pend Oreille Counties) and 100 business and community leaders in Spokane. DVDs of this video were delivered to Chief Tidwell and members of the Washington State congressional delegation.

The Northeast Washington Forestry Coalition started working with the Colville National Forest in 2002. Since then, the Forest and NEWFC have successfully collaborated on twenty-two projects without appeal or litigation. For example, NEWFC’s collaborative efforts and field work helped resolve some of the public concerns with the Malo Eastlake and Summit Pierre Fuel Reduction Projects located inside the landscape.

Currently NEWFC and the Forest are collaborating on two projects within the landscape, Kettle Face Fuels Reduction Project and East Wedge. The latter of these is a Challenge Cost Share project coordinated with the Stevens County Conservation District (SCCD) for the purpose of creating more fire resilient and healthier ecological conditions on NFS lands. The SCCD is responsible for collection, analysis, and drafting the NEPA document. By working together, the collaborative partners hope to identify additional project opportunities to supplement the Forest's normal program of work. This will increase employment opportunities for members of the local community. It also allows the broader community to gain an understanding of and support for the Forest's Restoration Strategy.

As part of the ongoing collaborative process, NEWFC contributed a "blueprint" for management of the Forest. Supported by more than 200 businesses and community leaders, as well as religious, hunting and fishing organizations, this "blueprint" assigns NFS lands into three management levels: wilderness designation, restoration, and active management. Each level has separate management objectives and goals, all of which support restoration within the perspective of the different land uses. This blueprint is typically used to support and supplement analysis per the Forest Plan when determining treatments and treatment locations at the project level. It is used to identify areas of mutual agreement.

The landscape occurs within two Washington State Counties, Ferry and Stevens. Both have Community Wildfire Protection Plans that identify the most critical issues of wildland/urban interface and give priority to areas where access, egress, and adjacent forest lands are of concern (see WUI map page 25). Working with the Counties, the Forest utilizes this prioritization as part of our Restoration Strategy to determine where the landscape, projects, and treatments occur. Projects conducted under HFRA authority integrate the priorities set out in these documents. They can be found at the following websites:

http://www.dnr.wa.gov/Publications/rp_burn_cwppferry.pdf
http://www.dnr.wa.gov/Publications/rp_burn_cwpp_stevens.pdf

The Forest collaborates on monitoring environmental conditions and project implementation. Washington State and the Colville National Forest conduct monitoring called for in the State Forest Health and Fire Protection Strategies and the State Water Quality Implementation Plan. We also work with NEWFC to conduct third-party monitoring. Third- party monitoring of project implementation and effects is considered by the Forest and NEWFC an effective tool to generate public trust in the process and agency. The results have been used to modify and, or adapt project implementation, and to measure success in restoration activities. These collaborative monitoring efforts are expected to continue or expand with CFLRP matching funds. Supplemental to the Colville National Forest Restoration Strategy the Forest is developing an effective adaptive management system to utilize the monitoring results (see Landscape Strategy section).

Wildfire

Federal Wildland Fire Guidance (2009) is to protect private property, allow fire to play its natural role where feasible, and to reduce large fire suppression costs. The placement of fuel treatments and the percent of areas treated largely determine overall effectiveness. It is estimated that 70% of fuel treatments will occur in the wildland/urban interface (WUI) and more than 25% of the landscape will be treated over the duration of the proposal. Suppression costs for large fires are expected to be reduced by 50% after 5 or more years of implementation and to decrease further as more land is treated. This estimate is based on the Forest's historic suppression costs and considers the suppression tactics acceptable to adjoining land managers (private, State, Federal, and Canada).

A prerequisite to reducing the cost of large fires is a landscape restored to resilient forest conditions. This will enhance the ability to manage wildfires for multiple objectives. The Forest's most recent large fires cost nearly $2,000 per acre for suppression alone. Due to the un-restored nature of the landscape these fires were managed with traditional full perimeter control suppression. Strategically placed restoration treatments and natural ignitions will provide landscape patterns that improve fire regime condition class and allow opportunities to manage wildfires with techniques other than costly full suppression. They will reduce rehabilitation costs, commodity losses, and non-market resource value losses. Using minimum values published by University of Washington in the WADNR Forest Health Strategy, we estimate that $10,000,000 in future wildfire costs could be avoided with CFLRP matching funds, by the implementation of the CNF Restoration Strategy over a 10-year period.

Strategically placed restoration treatments will protect private property and egress routes within the WUI and communities at risk identified in the County Wildfire Protection Plans (see Collaboration section). Placing treatments to provide greater depth into the landscape will improve effectiveness of fire control and allow fire managers to consider multiple objectives. Treatments are predicted to improve public and firefighter safety and provide areas where wildfire suppression activities are more successful (Moghaddas 2006). Coordination across boundaries is important to achieve maximum effects, so the Forest will continue to work with adjacent Tribal, State and private landowners.

Potential fire behavior can be understood by looking at natural fire regimes and fire regime condition classes (FRCC). Natural fire regimes vary mainly by climate and geography and manifest as Biophysical Environments (BEs) (see Ecological Context). Fire regimes describe fire behavior in terms of disturbance patterns, timing, frequency, intensity, and extent (Agee 1993). Local fire history studies (Schellhass et al. 2000a, 2000b) and a review of ecological information of eastern Washington (Franklin et al. 2008) support use of the natural fire regimes listed in table 3 above, and as follows.

I - Low severity fire with some mixed severity: fire mortality less than 25% of overstory vegetation, fire return interval of 1 to 25 years

III - Mixed severity with some low severity: fire mortality of 25 to 75% of overstory vegetation, fire return interval of 35 to 100 or more years, patches of higher severity create a mosaic pattern

IV - High severity stand replacement: fire mortality of more than 75% of overstory vegetation, fire return interval of 50 to 200 or more years, patch size large

Fire regime condition class is a measure of the degree of departure from the natural fire regime a BE has experienced. Greater departure results in alterations of key ecosystem components such

as species and structural composition, age distribution, and canopy closure. Typically FRCC increases from activities such as fire suppression, past timber harvest, cattle grazing, and establishment of exotic species (Schmidt et al. 2002). Departure from natural fire regimes in dry forest types are also characterized by heavy fuel loads and a high degree of horizontal and vertical connection of vegetation across the landscape (Franklin et al. 2008). Analysis conducted at the project level (about 25,000 acres), showed the areas were moderately to highly departed from natural regimes. At the stand level, the majority (84%) of the forested landscape falls into FRCC 2, much of this approaching FRCC 3.

Table 5. Distribution of fire regime condition classes

Amount of departure from natural fire regimes		Percent of stands
FRCC 1	Low Departure	4
FRCC2	Moderate Departure	84
FRCC3	High Departure	12

It is expected that potential wildfire behavior of future fires in the majority of the forested landscape (FRCC 2 and 3) would result in high severity burns at amounts uncharacteristic of their natural fire regimes. The recent Doyle Complex (2008) exemplified this. It burned about 1,000 acres of warm, dry Douglas-fir, ponderosa pine BE largely with mixed and high severity. Restoration treatments will move individual stands and the landscape as a whole toward a lower FRCC. This will go far to create more fire resilient and resistant conditions, particularly in the lower elevation BEs and in WUI.

Table 6. Recent fires within the landscape

Fire Name	Acres	Year
Doyle	1,000	2008
Bisbee	484	2006
Togo	5,280	2003
Mt. Leona	6,400	2001
Copper Butte	8,000	1994
White Mtn.	23,000	1988

Case studies indicate that surface fuel reductions increase the likelihood that a stand can survive a wildfire (Agee and Skinner 2005). Agee and Skinner's 2005 review of numerous case studies and the behavior of the Doyle Fire showed that wildfire severity lessened when burning through and around recent fuel treatments. Project level FVS modeling predicts that wildfires would remain as surface fires in treated areas under all but extreme weather conditions.

Restoration treatments help reestablish natural fire regimes by modifying the fuel arrangement to reduce the risk of severe wildfires in the low and mid-elevation BEs. With the CFLRP matching funds, the Forest will be able to expand utilization of prescribed fire and a variety of mechanical and manual techniques such as lop and scatter, whole tree yarding, piling, grinding (for bio-mass fuel), and mastication. Treatment of canopy fuels by commercial thinning will be used to disrupt crown continuity and reduce crown densities. This not only helps to reduce active crown fire potential but improves forest resiliency to insect and disease infestation by reducing forest homogeneity and improving tree vigor (Hessburg et al. 2005).

Prescribed fire is a viable tool to jumpstart many ecosystem processes in the absence of frequent wildfire (North 2006). It also can be effective in performing more routine-level treatments necessary to the maintenance of BEs with Fire Regime I. The application of larger, landscape level prescribed burns will be critical to the maintenance and reestablishment of natural fire regimes. Furthermore, the mosaic result of landscape level prescribed fire intertwined with mechanical fuel treatments will lend to the reestablishment and maintenance of the heterogeneous landscape that was historically common in eastern Washington (Hessburg et al. 2005). The CFLRP matching funds will allow for reestablishment and maintenance of natural fire regimes, help shift the landscape back to FRCC 1, and thus limit lethal fires to more historic patterns. They will help the Forest set up the landscape to be resistant to potential future increases in fire frequency with climate change.

Utilization

The infrastructure within the Colville area is capable of utilizing the solid wood material down to a 2 inch top diameter. The Forest anticipates that for the project area described in this proposal approximately 404,000 CCF (210 MMBF) of material could be harvested and utilized from NFS lands during the ten year period, approximately 80 percent as saw timber. Trees to be harvested in the proposal area are between 3 and 21 inches DBH with a minimum top diameter of 2 inches. Trees between 5 and 7 inches DBH are generally utilized as pulp chip or lumber, while trees between 7 and 21 inches DBH are utilized as lumber or plywood. Small trees between 3 and 5 inches DBH are generally utilized as pulp chips or as fuel in local cogeneration plants. Under current stewardship contracts, biomass material inclusive of trees limbs, trees less than 3 inch in diameter, and bark are similarly utilized for fuel. We anticipate that a significant portion of limbs and tops that were historically treated as slash will be utilized in this fashion.

Existing Infrastructure
✓ 10 Sawmills
✓ 2 Co-generation plants
✓ 1 Plywood plant
✓ 2 Chip facilities
✓ 2 Newsprint plants
✓ 1 Bark products plant
✓ 2 Wood pellet plants

The current infrastructure within the Colville's market area (Stevens, Ferry, Spokane, and Pend Oreille Counties, WA; Bonner, Kootenai, & Boundary Counties, ID) include ten sawmills, one plywood mill, two whole tree chipping facilities, two cogeneration plants, two pellet plants, one bark processing plant, and two newsprint plants. The larger 15 MegaWatt co-generation facility is currently qualified by USDA under the Biomass Crop Assistance Program (BCAP). An additional bio-energy facility is in the development stage in Stevens County. This facility will produce green energy, bio-char, and other wood based materials.

The Colville National Forest has had markets for small diameter material since the late 1980s when one of the first Hew Saw small diameter sawmills in the United States was constructed in Colville. Other local logging companies have adapted in the last twenty years to specialized logging systems that permit economical removal of small diameter material.

In the last couple of years USDA has awarded to a local firm two grants totaling $460,000 to assist in the purchase of equipment to process biomass for utilization as hog fuel. Two firms applied for such a grant in FY2010.

The value of material from restoration treatments is dependent on the global market for wood material. Historical stumpage values are about $50.00/CCF on the Colville National Forest. The existing diverse infrastructure and the inherent competition of wood products increase the value the Forest receives. The Forest anticipates that the value of harvested material from NFS lands will be sufficient to offset much of the other restoration work. Stewardship projects on the Forest have had positive cash balances and funded other restoration activities. This is especially true where landing slash piles are converted into material for energy production.

Wood Product Clients
✓ Avista
✓ Vaagen Brothers Lumber
✓ Boise Building Solutions
✓ Columbia Cedar
✓ Springdale Lumber
✓ Ponderay Newsprint
✓ Inland Empire Paper
✓ Stimson Lumber
✓ Lignetics
✓ Idaho Forest Group
✓ White Bark Processing
✓ Atlas Pellets

Washington State (*A Desirable Forest Health Program for Washington's Forests,* Appendices 4&5, Investigation of Alternative Strategies for Design, Layout, and Administration

of Fuel Removal Projects), Yale University, and Northern Arizona University have conducted recent forest health studies that show commercial harvest of overstocked stands will pay for much of the needed fuel reduction. The combination of this break-even scenario and the fire-management savings outlined above indicate a positive economic effect of restoration treatments. While decreasing the cost of suppression of wildfire the estimated maximum income from timber sale receipts available for restoration treatments over the ten year period could be $20,000,000.

Vaagen Brothers Lumber Company
Colville, Washington

Avista Corporation Co-generation Plant
Kettle Falls, Washington

Investments

In order to remain competitive in a world economy, manufacturing entities are required to constantly update their processes and equipment. A polling of several local manufacturing entities by NEWFC found that they invested on new technology an average of $3.67 per ton of material removed. The estimated volume to be removed from the project area during this 10 year period is approximately 2.5 million tons. The resulting investment by private industry over the 10 year period is estimated to be $9.75 million dollars. Accompanying this is an estimate by industry of the addition of about 160 new jobs.

There are unproven technologies relative to forest restoration. A number of entities in Washington State are currently investigating the potential for an economically viable transportation fuel conversion industry. One of the barriers to a significant capital investment is the lack of assured supply of biomass material. With a long-term program that will increase, on a sustainable and reliable basis, bio-fuel availability, these bio-fuel production technologies will be developed. Washington State's Cap-and-Trade program which is currently under construction is directed at supporting such a venture. With an investment from private sources of about $20 million, it is likely that another 15 MW facility could be supported with the kind of long term (15 or more years) reliable supply of raw material this proposal would help generate.

As these technologies and markets are formed and expanded there will be additional demand for raw materials which will increase the restoration capacity of the Colville National Forest. Similarly, with this proposal, the Forest will be able to supply its clients with a more constant supply of forest products, making investment in industries like bio-fuel more attractive.

Estimations of the number of jobs created or maintained by CFLRP funding vary. Based on the outputs generated from the Treatments for Restoration Economic Analysis Tool (TREAT) the expected investment of $30,205,000 CFLRP dollars in this ten-year project will have the annual impact of creating 496.8 part-time and full time jobs, worth an estimated $9,393,124 of direct, indirect and induced income (TREAT output in Appendix A).

Many of the processing facilities rely on certified loggers that are trained in protective harvest techniques to harvest wood products. Training by industry is generally “on-the-job” but sale layout and analysis require professional and technical training. There is an existing workforce of about 30 foresters, and forestry technicians that are employed by small businesses in the local area. The consistent outputs and accelerated production provided for by this proposal will help stabilize and expand these entities. Reliable, stable work is paramount to entice younger people into resource related professions.

Some of these projects may employ local private technical expertise for NEPA planning and sale implementation. The NEWFC’s “open door” policy is intended to encourage an ongoing recruitment of interested people and help citizens become well informed. Based on a recent study completed by Headwaters Economics in Bozeman, Montana (2007), this proposal could allow for as much as l60 new jobs over the ten year period.

The Colville National Forest offers a range of employment opportunities for permanent and seasonal employees and could add significantly to these opportunities with additional funding. For example, the Forest has developed a proposal to fund a diversity based field crew. This multi-function crew of 10 people would receive training in a wide array of forestry field work

including pre-commercial thinning, prescribed burning, inventory, and survey. The purpose is to train and provide skilled forestry workers for private, State, and Federal resource management.

The Curlew Job Corps and the Forest have a long-term relationship providing training and job opportunities through the Corps forestry program. With the advent of the additional implementation these opportunities will be expanded. For example, the Forest supports a Riparian Response Crew that works largely in the east side of the proposed landscape. It consists of one team leader and 4 to 6 youth hired from the Work Source program at the local Curlew Job Corps. This crew is responsible for many stream restoration activities such as exclosure construction, stream bank stability projects, and revegetation. If CFLRP funding were obtained, it is expected that a second Riparian Response crew would be added to work on restoration activities that include the western portion of the landscape.

Currently the Forest employs 6 to 8 additional seasonal workers to implement other restoration activities and monitor forest condition trends. They work with specialists in fisheries, hydrology, soils, and wildlife. Many of them are hired while on college break as part of an effort to provide field experience to upcoming resource managers. It is also an effective tool to create a positive relationship between them and the Forest Service; a beginning from which many current Forest employees were hired. This program would double with implementation of this proposal.

Youth groups may be employed by industry for some projects including hand-piling of debris and tree-planting. The existing infrastructure actively promotes educational opportunities in forestry programs offered to local school districts. Without an acceleration of projects within in the area, infrastructure may not continue to promote educational opportunities or employment.

Prescribed fire treatments have a wide range of costs per acre. Projects in the urban interface are typically more expensive due to the complexity associated with working adjacent to private property. Though ineligible for matching funds, the Wyden Amendment will continue to be used to reduce costs and provide options when establishing logical prescribed burn unit boundaries. Larger scale prescribed fire has been successfully used to meet multiple objectives, including wildlife habitat improvements and fuels reduction objectives. Because the cost for large scale prescribed fire use is lower per acre than small projects, as implementation of restoration progresses, costs are expected to go down since it will be safe to burn larger areas.

It is not anticipated that the planning and preparation expenses for these projects will decrease due to requirements of NEPA and harvest unit layout. However, over the longer term, restoration unit costs will decrease; new technologies for harvest will develop. Recovery costs will increase due to increasing demand and lower margins.

Funding Estimates

Table values were adjusted for inflation at the rate of 4%/yr with 2010 as the base year.

2010

Table 7. Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in FY 2010 to match funding from the Collaborative Forested Landscape Restoration Fund	
Fiscal Year 2010 Funding Type	**Dollars/Value Planned**
FY 2010 Funding for Implementation	$1,707,150
FY 2010 Funding for Monitoring	$36,175
1. USFS Appropriated Funds	$862,075
2. USFS Permanent & Trust Funds	$12,350
3. Partnership Funds	$0
4. Partnership In-Kind Services Value	$600,000
5. Estimated Forest Product Value	$0
6. Other (ARRA, Other federal ($10,000))	$268,900
FY 2010 Total (total of 1-6 above for matching CFLRP request)	$1,743,325
FY 2010 CFLRP request (must be equal to or less than above total)	$286,875
Funding off NFS lands associated with proposal in FY 2010 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund)	
Fiscal Year 2010 Funding Type	
Colville Confederated Tribes	
USDI BLM Funds	
USDI (other) Funds	
Other Public Funding	$2,137,317
Private Funding	$220,817

2011

Table 8. Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in FY 2011 to match funding from the Collaborative Forested Landscape Restoration Fund	
Fiscal Year 2011 Funding Type	**Dollars/Value Planned**
FY 2011 Funding for Implementation	$1,532,835
FY 2011 Funding for Monitoring	$56,160
1. USFS Appropriated Funds	$941,720
2. USFS Permanent & Trust Funds	$13,655
3. Partnership Funds	$6,240
4. Partnership In-Kind Services Value	$0
5. Estimated Forest Product Value	$616,980
6. Other (other federal)	$10,400
FY 2011 Total (total of 1-6 above for matching CFLRP request)	$1,588,995
FY 2011 CFLRP request (must be equal to or less than above total)	$1,588,995
Funding off NFS lands associated with proposal in FY 2011 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund)	
Fiscal Year 2011 Funding Type	
Colville Confederated Tribes	$46,413
USDI BLM Funds	
USDI (other) Funds	
Other Public Funding	$1,339,850
Private Funding	$229,650

2012

Table 9. Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in FY 2012 to match funding from the Collaborative Forested Landscape Restoration Fund	
Fiscal Year 2012 Funding Type	**Dollars/Value Planned**
FY 2012 Funding for Implementation	$3,308,836
FY 2012 Funding for Monitoring	$60,029
1. USFS Appropriated Funds	$2,064,315
2. USFS Permanent & Trust Funds	$47,379
3. Partnership Funds	$3,245
4. Partnership In-Kind Services Value	$0
5. Estimated Forest Product Value	$1,243,110
6. Other (other federal)	$10,816
FY 2012 Total (total of 1-6 above for matching CFLRP request)	$3,368,865
FY 2012 CFLRP request (must be equal to or less than above total)	$3,368,865
Funding off NFS lands associated with proposal in FY 2012 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund)	
Fiscal Year 2012 Funding Type	
Colville Confederated Tribes	$48,269
USDI BLM Funds	
USDI (other) Funds	
Other Public Funding	$1,393,444
Private Funding	$238,836

2013

Table 10. Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in FY 2013 to match funding from the Collaborative Forested Landscape Restoration Fund	
Fiscal Year 2013 Funding Type	**Dollars/Value Planned**
FY 2013 Funding for Implementation	$3,111,558
FY 2013 Funding for Monitoring	$68,560
1. USFS Appropriated Funds	$2,122,843
2. USFS Permanent & Trust Funds	$292,465
3. Partnership Funds	$6,749
4. Partnership In-Kind Services Value	$0
5. Estimated Forest Product Value	$746,813
6. Other (other federal)	$11,249
FY 2013 Total (total of 1-6 above for matching CFLRP request)	$3,180,119
FY 2013 CFLRP request (must be equal to or less than above total)	$3,180,119
Funding off NFS lands associated with proposal in FY 2013 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund)	
Fiscal Year 2013 Funding Type	
Colville Confederated Tribes	
USDI BLM Funds	
USDI (other) Funds	
Other Public Funding	$1,449,181
Private Funding	$248,389

2014

Table 11. Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in FY 2014 to match funding from the Collaborative Forested Landscape Restoration Fund

Fiscal Year 2014 Funding Type	Dollars/Value Planned
FY 2014 Funding for Implementation	$5,468,914
FY 2014 Funding for Monitoring	$88,675
1. USFS Appropriated Funds	$1,636,983
2. USFS Permanent & Trust Funds	$949,925
3. Partnership Funds	$10,529
4. Partnership In-Kind Services Value	$0
5. Estimated Forest Product Value	$2,948,454
6. Other (other federal)	$11,699
FY 2014 Total (total of 1-6 above for matching CFLRP request)	$5,557,590
FY 2014 CFLRP request (must be equal to or less than above total)	$4,000,000
Funding off NFS lands associated with proposal in FY 2014 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund)	
Fiscal Year 2014 Funding Type	
Colville Confederated Tribes	
USDI BLM Funds	
USDI (other) Funds	
Other Public Funding	$258,325
Private Funding	$258,325

2015

Table 12. Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in FY 2015 to match funding from the Collaborative Forested Landscape Restoration Fund

Fiscal Year 2015 Funding Type	Dollars/Value Planned
FY 2015 Funding for Implementation	$5,560,921
FY 2015 Funding for Monitoring	$105,180
1. USFS Appropriated Funds	$2,135,043
2. USFS Permanent & Trust Funds	$1,655,865
3. Partnership Funds	$10,950
4. Partnership In-Kind Services Value	$0
5. Estimated Forest Product Value	$1,852,077
6. Other (other federal)	$12,167
FY 2015 Total (total of 1-6 above for matching CFLRP request)	$5,666,101
FY 2015 CFLRP request (must be equal to or less than above total)	$4,000,000
Funding off NFS lands associated with proposal in FY 2015 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund)	
Fiscal Year 2015 Funding Type	
Colville Confederated Tribes	
USDI BLM Funds	
USDI (other) Funds	
Other Public Funding	$268,658
Private Funding	$268,658

2016

Table 13. Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in FY 2016 to match funding from the Collaborative Forested Landscape Restoration Fund	
Fiscal Year 2016 Funding Type	**Dollars/Value Planned**
FY 2016 Funding for Implementation	$1,702,698
FY 2016 Funding for Monitoring	$147,599
1. USFS Appropriated Funds	$946,648
2. USFS Permanent & Trust Funds	$263,186
3. Partnership Funds	$102,491
4. Partnership In-Kind Services Value	$0
5. Estimated Forest Product Value	$525,319
6. Other (other federal)	$12,653
FY 2016 Total (total of 1-6 above for matching CFLRP request)	$1,850,297
FY 2016 CFLRP request (must be equal to or less than above total)	$1,850,297
Funding off NFS lands associated with proposal in FY 2016 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund)	
Fiscal Year 2016 Funding Type	
Colville Confederated Tribes	
USDI BLM Funds	
USDI (other) Funds	
Other Public Funding	$279,404
Private Funding	$279,404

2017

Table 14. Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in FY 2017 to match funding from the Collaborative Forested Landscape Restoration Fund	
Fiscal Year 2017 Funding Type	**Dollars/Value Planned**
FY 2017 Funding for Implementation	$4,299,589
FY 2017 Funding for Monitoring	$119,914
1. USFS Appropriated Funds	$1,334,486
2. USFS Permanent & Trust Funds	$1,462,033
3. Partnership Funds	$7,896
4. Partnership In-Kind Services Value	$0
5. Estimated Forest Product Value	$1,601,928
6. Other (other federal)	$13,159
FY 2017 Total (total of 1-6 above for matching CFLRP request)	$4,419,503
FY 2017 CFLRP request (must be equal to or less than above total)	$4,000,000
Funding off NFS lands associated with proposal in FY 2017 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund)	
Fiscal Year 2017 Funding Type	
Colville Confederated Tribes	
USDI BLM Funds	
USDI (other) Funds	
Other Public Funding	$290,580
Private Funding	$290,580

2018

Table 15. Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in FY 2018 to match funding from the Collaborative Forested Landscape Restoration Fund	
Fiscal Year 2018 Funding Type	**Dollars/Value Planned**
FY 2018 Funding for Implementation	$3,718,354
FY 2018 Funding for Monitoring	$211,239
1. USFS Appropriated Funds	$1,551,068
2. USFS Permanent & Trust Funds	$1,722,686
3. Partnership Funds	$8,211
4. Partnership In-Kind Services Value	$0
5. Estimated Forest Product Value	$633,942
6. Other (other federal)	$13,686
FY 2018 Total (total of 1-6 above for matching CFLRP request)	$3,929,593
FY 2018 CFLRP request (must be equal to or less than above total)	$3,929,593
Funding off NFS lands associated with proposal in FY 2018 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund)	
Fiscal Year 2018 Funding Type	
Colville Confederated Tribes	
USDI BLM Funds	
USDI (other) Funds	
Other Public Funding	$302,203
Private Funding	$302,203

2019

Table 16. Funds to be used on NFS lands for ecological restoration treatments and monitoring that would be available in FY 2019 to match funding from the Collaborative Forested Landscape Restoration Fund	
Fiscal Year 2019 Funding Type	**Dollars/Value Planned**
FY 2019 Funding for Implementation	$4,357,286
FY 2019 Funding for Monitoring	$174,783
1. USFS Appropriated Funds	$3,509,246
2. USFS Permanent & Trust Funds	$72,589
3. Partnership Funds	$4,270
4. Partnership In-Kind Services Value	$0
5. Estimated Forest Product Value	$931,731
6. Other (other federal)	$14,233
FY 2019 Total (total of 1-6 above for matching CFLRP request)	$4,532,069
FY 2019 CFLRP request (must be equal to or less than above total)	$4,000,000
Funding off NFS lands associated with proposal in FY 2019 (does not count toward funding match from the Collaborative Forested Landscape Restoration Fund)	
Fiscal Year 2019 Funding Type	
Colville Confederated Tribes	
USDI BLM Funds	
USDI (other) Funds	
Other Public Funding	$314,291
Private Funding	$314,291

Funding Plan

Values in the Funding Estimate tables above and associated with activities occurring on NFS lands are based on either authorized activities or on future projected activities scheduled in the Forest's ten-year action plan. The ten-year action plan represents a strategy for maintaining a balanced program of work across the entire forest. It was assumed that funding trends will remain consistent over the life of this project and sufficient funds will be available for the planning phase. The numbers presented in the Funding Estimate tables are felt to be both reasonable and conservative estimates based on current and projected funding trends for the planning, implementation, and monitoring phases. All dollars are 2010 estimates adjusted at an annual inflation rate of four percent for out-year projections.

Projects and activities have been identified and reviewed as acceptable for meeting the guidelines described in Title IV of the Omnibus Public Land Management Act of 2009 (PL 111-11), and for obligating both matching funds and CFLRP funds allocated in FY2010 and FY2011. Great care was taken to ensure the Forest has the ability and personnel in place to obligate the requested funding for these two years. However, the Forest's ability to obligate the CFLRP fund dollars is driven by when the funds are released. It will become very difficult to obligate these funds if they are released after mid-June for FY10 or mid-Feb for FY11.

The Colville National Forest will also continue to pursue additional leveraging of NFS system dollars through grants, agreements, donations, and in-kind opportunities. It is hard to estimate contributions from these sources since many of the proposals are competitive.

Monitoring costs projected in the Funding Estimate tables only cover the ten-year request period, additional monitoring continues well past the ten-year post treatment periods. Many of the monitoring protocols associated with the collaborative effort and adaptive management strategies will extend out at least 15 years, post treatment. Where necessary, adjustments to the monitoring program will be done to meet the requirements for acceptance of the CFLRP funds.

Prescribed fire use on the Colville National Forest

Confederated Tribes of the Colville Reservation - The treatment acres and value from these lands is contributed from the only approved planned activity on Tribal lands within the landscape area. Treatments will occur during FY11-12, following the planned timber harvest that will finance the treatments.

State Lands (Other Public Funding) - Treatments on State lands within the proposal area are concentrated in the years 2010-2013. This represents the end of the cycle of work in this area for the proposal period. The actual acres to be treated will depend on the sale receipts generated from the remaining sales, but Washington State Department of Natural Resources was confident the planned treatment acres and value stated in the Proposed Treatment section and Funding Estimate tables will be close to the actual.

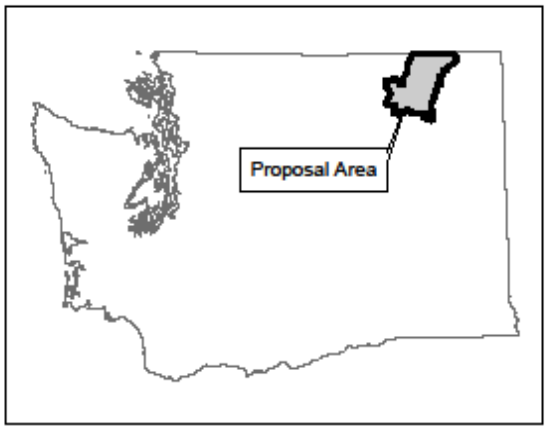
Private Lands - All the treatment activities associated with private lands involve cost sharing between public funds and the private land owners tied to the Counties' Community Wildfire Protection Plans. The estimated treatment acres and associated costs are based on the trends of public funds available and the assumption that there are sufficient private landowners willing to match State funds or participate in the EQIP (Environmental Quality Incentives Program). To date, both agencies that work with the matching funds, Washington State Department of Natural Resources and the USDA Natural Resource Conservation Service have had no trouble finding willing landowners for their restoration grant programs.

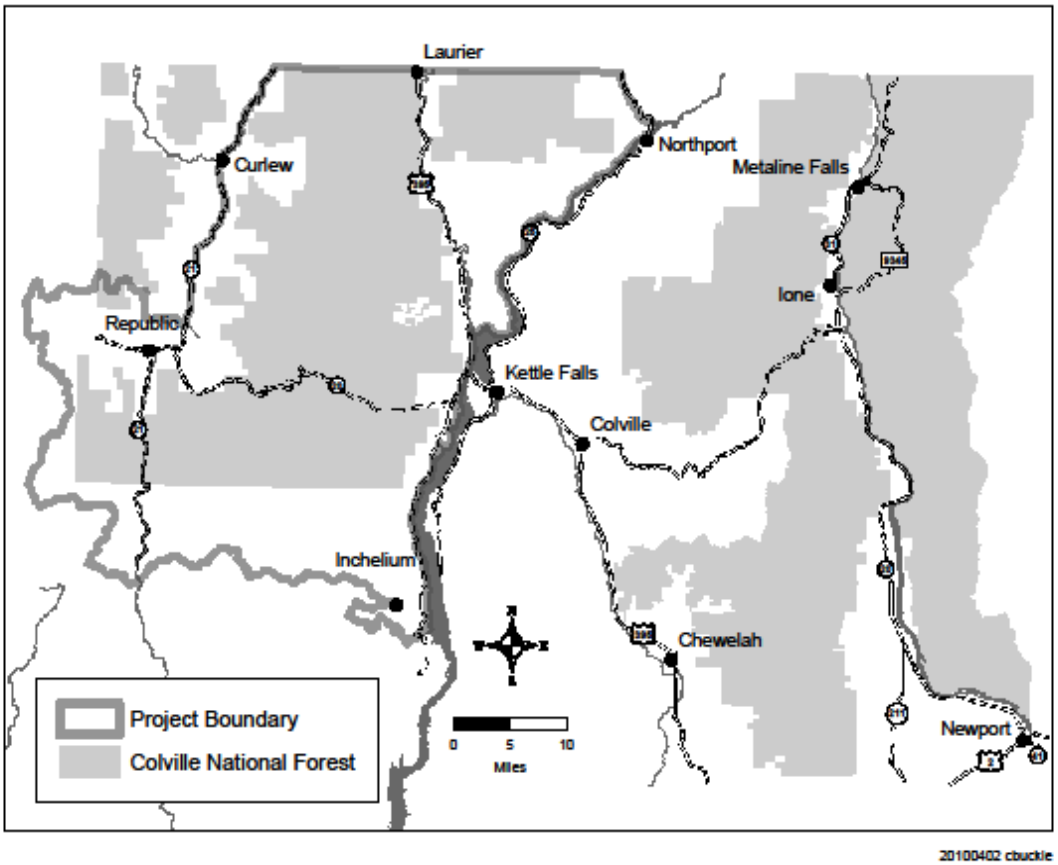
Other Federal lands (BLM and NPS) - Restoration work occurs on these two agencies' jurisdictional lands within the proposal area, but it is not generally planned ten-years in advance and may be opportunistic. The agencies anticipated they would be treating less than 600 acres in the landscape over the ten-year period. The funding contributions of these two agencies are not represented in the Funding Estimate Tables.

Maps

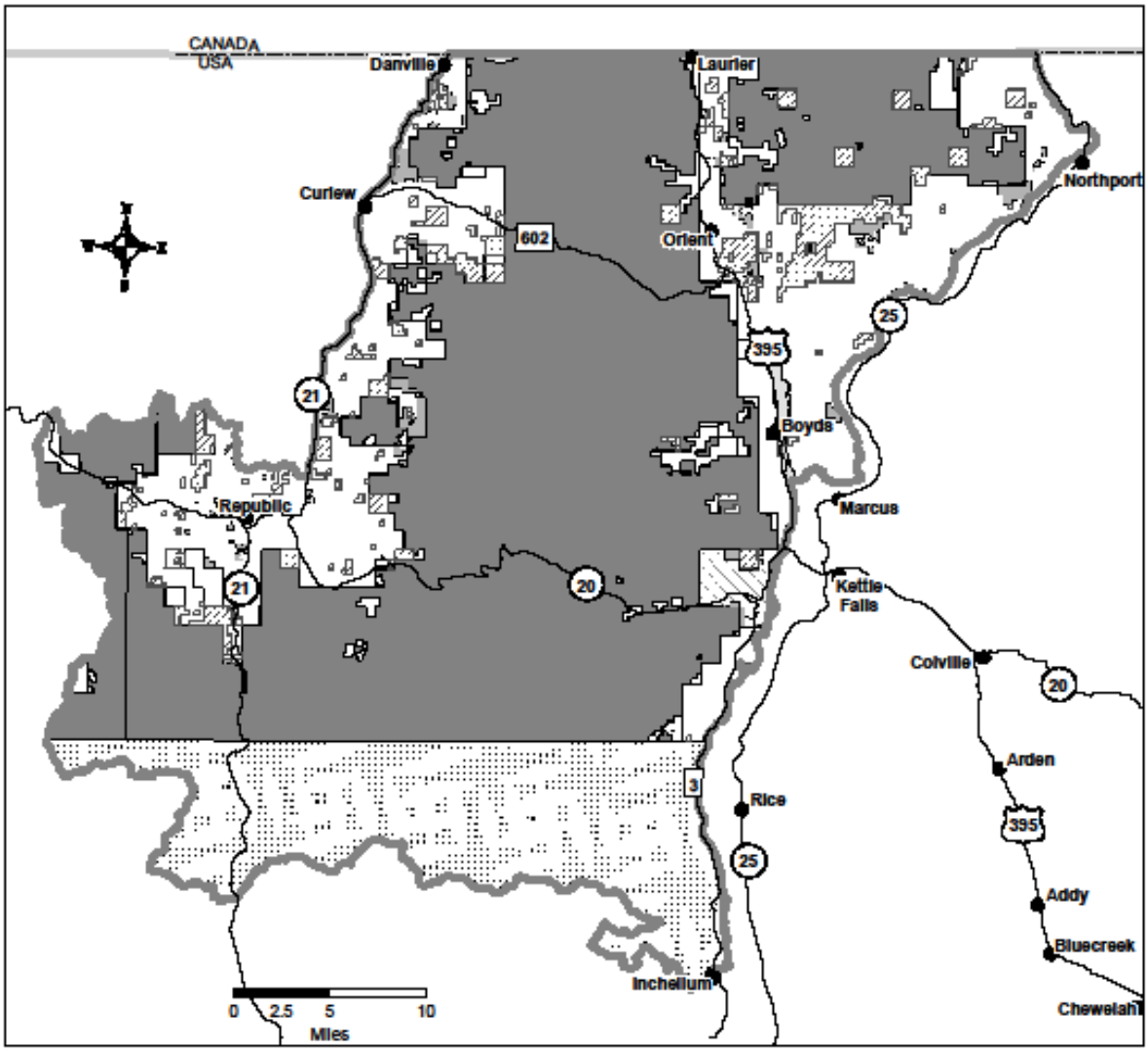
Collaborative Forest Landscape Restoration Program (CFLRP) Proposal

VICINITY MAP





Collaborative Forest Landscape Restoration Program (CFLRP) Proposal



Land Ownership and Administration

- Project Boundary
- BIA, Colville Confederated Tribes - 147,620 Acres
- Bureau of Land Management - 9,697 Acres
- WA Dept of Natural Resources - 37,192 Acres
- National Forest System Land - 497,583 Acres
- Other Federal Administration - 4,525 Acres
- Private/Unknown - 213,126 Acres
- WA Dept of Fish and Wildlife - 6,368 Acres

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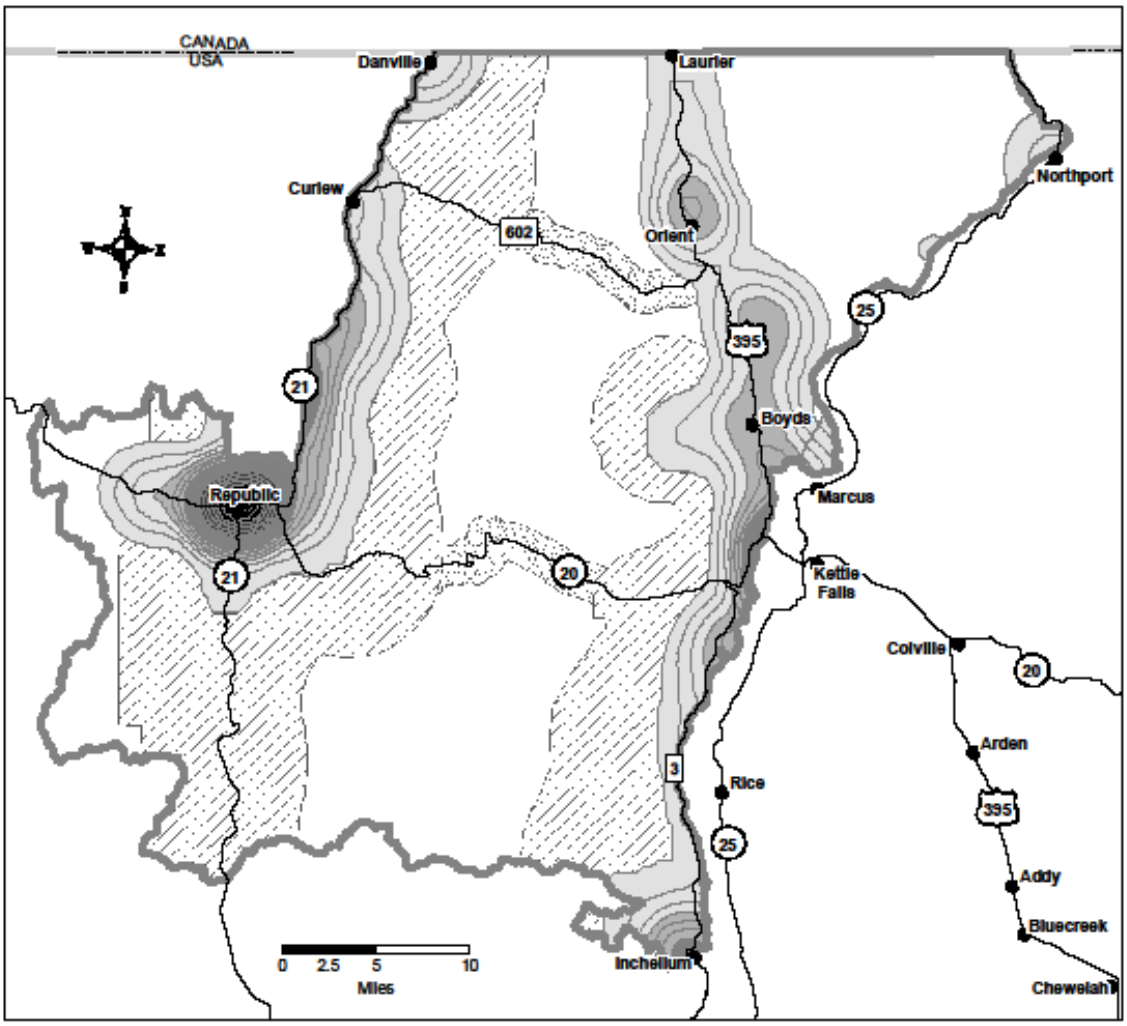
Collaborative Forest Landscape Restoration Program (CFLRP) Proposal



WUI: Interface and Intermix Condition*

- High Density Interface
- Medium Density Intermix
- Low Density Intermix
- Infrastructure Areas (WUI)
- Rural Condition (WUI)
- Non-WUI Condition
- Project Boundary

*From Ferry and Stevens County Community Wildfire Protection Plans

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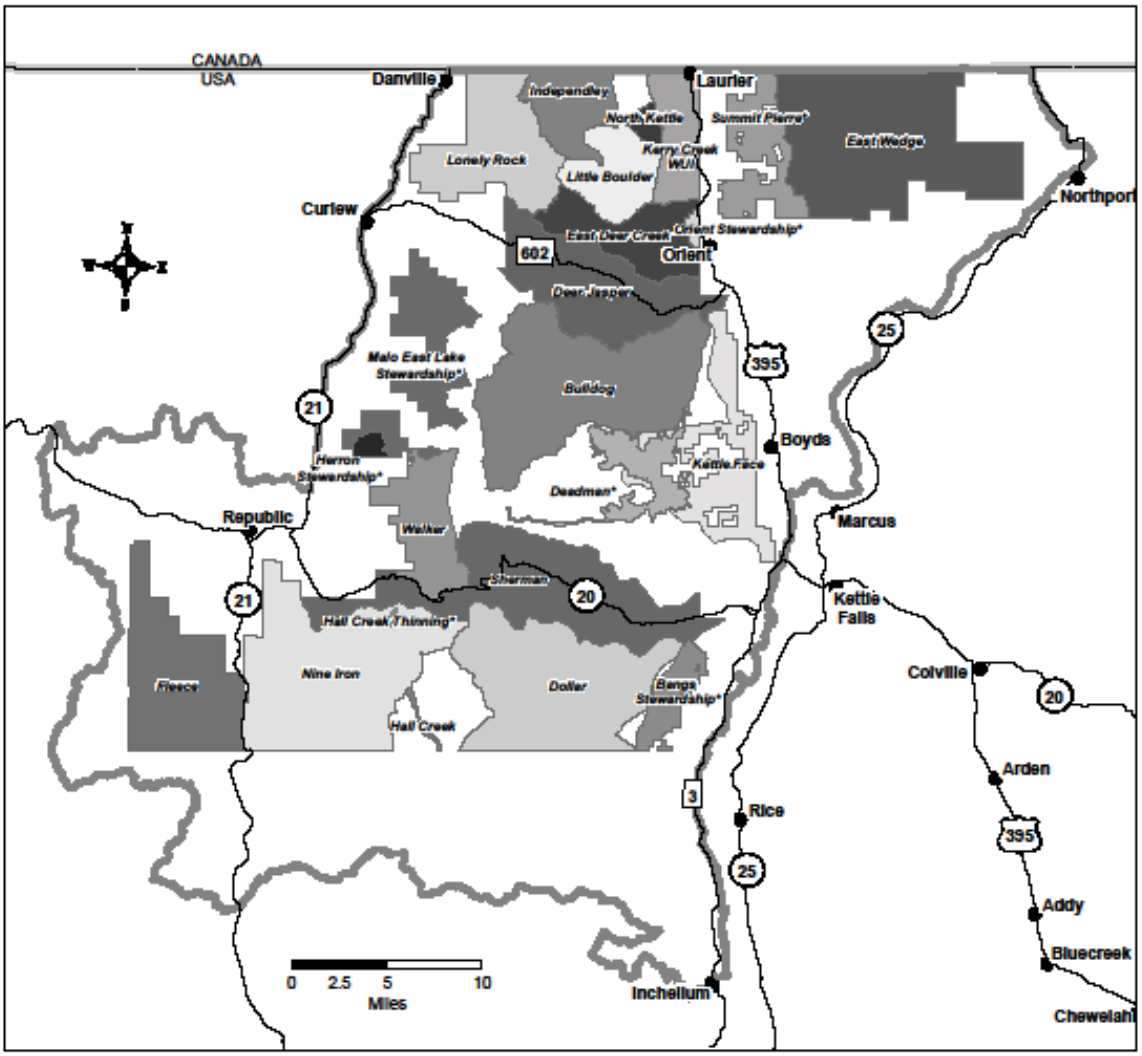
Collaborative Forest Landscape Restoration Program (CFLRP) Proposal



Colville National Forest Ten Year Action Plan

* Indicates Planning Complete (in some phase of Implementation)
All Others - Outyear Planning

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Landscape Strategy

The Colville National Forest developed the Colville National Forest Restoration Strategy: a process for guiding restoration projects within the context of ecosystem management (http://fsweb_col.ewz.r6.fs.fed.us/, under the heading "Resources"). The Restoration Strategy provides a starting point and outlines a process for an integrated evaluation of forest landscapes that sets the context and priorities for landscape and stand level restoration treatments. Though primarily directed at forest restoration, it is complimentary to the Forest Plan and adaptive to supplemental plans and strategies. Objectives of the Restoration Strategy are to:

- Address new science and management direction including the incorporation of climate change
- Provide a consistent definition and approach to forest restoration
- Increase the restoration footprint through a process that identifies high priority, strategic treatment areas
- Improve integration and efficiency of planning and implementation
- Improve monitoring and adaptive management

At this time there are four vegetation restoration projects for which the Forest has initiated NEPA planning and an additional 11 included on the Ten Year Action Plan. A landscape analysis using contemporary modeling techniques will be used to refine the Restoration Strategy as part of the CFLRP proposal. Supplemental to the Strategy will be development in partnership with the Pacific Northwest Science Delivery and Adoption Program, (PNW Fire Science Consortium) of the communication, monitoring, and adaptive management pieces.

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Appendix A – TREAT Output

Treatments for Restoration Economic Analysis Tool (TREAT)

Colville NF CFLRP

Select Your FS Region Below

Region_6

Enter Funding and Employment

Enter Total Proposed Funding	$2,205,000
Enter number of years for project implementation	10
Annual Project Funding	$220,500
Enter percent of this funding that is going to be used for contracted work (**Federal firms only**)	65%
Enter percent of this funding that is going to be used for Force Account **Implementation & Monitoring**	20%
Totals -- must be less than or equal to 100%	85%
Enter **Annual** Force Account FTEs For Implementation & Monitoring	300

Contract Funding Distributions: Enter % of Contracted Funding Applied to Categories Below

Description	Types of Products	Project Percent
Facilities, Watershed, Roads and Trails		15%
Abandoned Mine Lands		1%
Ecosystem Restoration, Hazardous Fuels and Forest Health	**No commercial products.** Primarily labor intensive, simple mechanical treatments such as thinning with chain saws, piling and burning, etc.	24%
Thinning and Biomass Harvesting	**Does include commercial products.** Includes chipping in the woods and mechanical treatments such as commercial logging, mastication, etc.	57%
Contracted Monitoring (Does not include in-kind and volunteer contributions)	Services Contracted for monitoring	3%
	Totals -- must be less than or equal to 100%	100%

Enter amount of harvest volume, if any, that will be produced by the project

		% of Total
CCF	310,635.00	100.0%
MBF	0.00	0.0%
Dry Tons	0.00	0.0%
Cords	0.00	0.0%
Total CCF==>	310,635.00	100%
Annual Total CCF==>	31,063.50	

Product Distributions: Enter % of Harvest Processed by Firms Based in Model Area

Description	Types of Prdts Shipped	Volume Percent
Sawmills and wood preservation	lumber, bolts, woodchips, pallets, posts, poles, pressure and creosote treated lumber	65%
Veneer and plywood manufacturing	veneer, plywood	10%
Engineered wood member and truss manufacturing	various engineered products, trusses	5%
Reconstituted wood product manufacturing	particleboard, fiberboard, hardboard, OSB	0%
Wood container and pallet manufacturing	wood boxes, flats, baskets, casks, crates and pallets	0%
Prefabricated wood building manufacturing	residential/ farm bldgs, sections, & panels	0%
All other miscellaneous wood product manufacturing	wood dowels, wood handles, toothpicks	0%
Pulp Mills	pulp only	0%
Paper Mills	paper of all types	10%
Paperboard Mills	paperboard	0%
Paperboard Container Manufacturing	paper boxes, containers, cartons,tubes	0%
Biomass--Cogen	electricity and heat	10%
Firewood (Commercial)	commercial firewood	0%
Firewood (Home Use)	firewood for home use	5%
Totals -- must be less than or equal to 100%		100%

Un-hide Calculation Sheets | UnProtect TREAT

Region 6

TREAT Project Impacts for: Colville NF CFLRP

SUMMARY TABLES: Average Annual Impacts

Table 5

	Employment (# Part and Full-time Jobs)	Labor Inc (2009 $)
Commercial Forest Products	156.3	$7,414,929
Other Project Activities	35.0	$1,967,813
FS Implementation and Monitoring	305.5	$610,382
Total Project Impacts	496.8	$9,393,124

Note

Employment is full, part-time, and temporary jobs (direct and secondary). Labor Income is the value of wages and benefits plus Proprietor's Income (direct and secondary)

Other Project Activities (ecosystem restoration, etc.) are labor intensive and therefore will produce higher employment impacts relative to commercial harvest activities which are highly mechanized and are not as labor intensive.

Impacts-Jobs and Income

The economic impacts of the restoration strategy are reported in this worksheet. No data entry is required, and the summary table may be cut a paste directly into the proposal. As reported here, the jobs and labor income are a result of the direct, indirect and induced effects, and are assumed to last the life of the project.

Detailed Average Annual Impacts Table

	Employment (# Part and Full-time Jobs)			Labor Inc (2009 $)		
	Direct	Indirect and Induced	Total	Direct	Indirect and Induced	Total
Commercial Forest Products						
Sawmills	20.2	42.3	62.5	1,152,427	1,643,542	2,795,970
Plywood and Veneer Softwood	8.7	12.5	21.2	496,430	555,741	1,052,171
Plywood and Veneer Hardwood	-	-	-	-	-	-
Oriented Strand Board (OSB)	-	-	-	-	-	-
Mills Processing Roundwood Pulp Wood	2.5	12.5	14.8	275,615	500,252	775,867
Other Timber Products	-	-	-	-	-	-
Facilities Processing Residue From Sawmills	10.1	40.4	50.5	890,511	1,594,555	2,485,067
Facilities Processing Residue From Plywood/Veneer	1.2	5.0	6.2	109,851	196,283	306,134
Biomass--Cogen	-	-	-	-	-	-
Total Commercial Forest Products	43.0	113.3	156.3	2,924,585	4,490,344	7,414,929
Other Project Activities						
Facilities, Watershed, Roads and Trails	2.9	1.8	4.7	$150,829	$83,411	$234,241
Abandoned Mine Lands	0.1	0.1	0.2	$6,605	$5,084	$11,689
Ecosystem Restoration, Hazardous Fuels, and Forest Health	12.8	2.4	15.2	$407,483	$98,17	$505,660
Thinning and Biomass	9.9	4.1	14.0	$391,744	$180,27	$571,820
Commercial Firewood	0.0	0.0	0.0	$0	$0	$0
Contracted Monitoring	0.5	0.4	0.9	$26,934	$17,47	$44,408
FS Implementation and Monitoring	301.6	3.9	305.5	$444,502	$165,880	$610,382
Total Other Project Activities	327.8	12.7	340.5	$1,426,397	$548,79	$1,978,196
Total All Impacts	370.8	126.0	496.8	$4,352,981	$5,040,143	$9,393,124

Appendix B – Letters of Support

NORTHEAST WASHINGTON FORESTRY COALITION

Lloyd McGee, President
565 West 5th Ave
Colville, WA 99114
www.newforestrycoalition.org

"We will not solve the problems of the world from the same level of thinking that created them." Albert Einstein

Mary Wagner, Regional Forester
Pacific Northwest Region
U.S. Forest Service
333 S.W. First Ave.
Portland, OR. 97204-3440

Dear Ms. Wagner:

The Northeast Washington Forestry Coalition (NEWFC) recommends that the Colville National Forest CFLRP Proposal be selected and funded for the year 2010 and for the next 10 years. NEWFC has worked collaboratively with the CNF in the creation of this proposal and we strongly believe that the selection of this proposal will provide the CFLRP program with an early and enduring success story.

NEWFC was formed in 2002 and the CNF and NEWFC have been cooperatively collaborating under a formal Memorandum of Understanding since 2005. We are committed to being a "Model Forest for the Nation". Over these passed 5 years, 22 large scale stewardship projects have been successfully implemented with no appeals and annual harvest levels and acres treated have continually increased over this period. We will continue to adaptively collaborate on this landscape restoration strategy plan.

Our NEWFC membership includes Vaagen Bros. Lumber Company, Conservation Northwest, 49 Degrees North Ski Resort, Columbia Cedar Company, Avista Biomass Generation Plant, The Lands Council, Williamson Forestry Consulting, Stimson Lumber Company, American Forest Resource Council, Ponderay Newsprint, Boise-Cascade Forest Products and other local businesses and community citizens. We collaborate with local government officials and tribal interests whenever possible.

Our local forest products infrastructure is diverse and efficient. The local industry has a strong partnership with the CNF and serves as a valuable tool in implementing the landscape restoration treatments. This well positioned infrastructure maximizes the utilization of these restoration bi-products and the valuable funding from the bi-product purchases will support continuous future restoration projects.

NEWFC strongly recommends the selection of the CNF CFLRP proposal and we are committed to sharing our knowledge gained through this program with many other collaborative groups wherever and whenever possible.

Sincerely,

Lloyd McGee

Lloyd McGee, President-NEWFC

CATHY McMORRIS RODGERS
5TH DISTRICT, WASHINGTON

COMMITTEES:
NATURAL RESOURCES
RANKING MEMBER, WATER & POWER
ARMED SERVICES
EDUCATION AND LABOR

REPUBLICAN CONFERENCE
VICE CHAIR
DEPUTY WHIP

Congress of the United States
House of Representatives

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ASOTIN
COLUMBIA
FERRY
GARFIELD
LINCOLN
OKANOGAN
PEND OREILLE
SPOKANE
STEVENS
WALLA WALLA
WHITMAN

May 5, 2010

Mary Wagner, Regional Forester
Pacific Northwest Region
U.S. Forest Service
333 S.W. First Avenue
Portland, Oregon 97204-3440

Dear Mary:

I am writing in regard to the Collaborative Forest Landscape Restoration Program (CFLRP) and to express my full support for the Colville National Forest (CNF) and its application for funding for the year 2010 and beyond pursuant to the Collaborative Forest Landscape Restoration Program. The strength of the CNF's application is demonstrated by the collaborative process that has been pursued over the last eight years as well as the existing facilities that are located within the Colville National Forest Market Area.

The CNF is unique. Since the creation of the Northeast Forestry Coalition (NFC), which represents a number of environmental, industry, and business stakeholders who are dedicated to resolving long standing conflicts related to forest management, I have witnessed firsthand the significant progress that has been made in the Colville National Forest. The NFC has successfully collaborated on 22 large-scale stewardship projects, all of which have been implemented without a single appeal or lawsuit. The U.S. Forest Service recognized these efforts by designating the CNF as a Proof of Concept Forest, the only one of three such designated forests in the nation that actually delivered on its Proof of Concept objectives.

Consistent with the goals and objectives of the NFC and the CNF, the CFLRP, and its coordinating fund, are intended to facilitate the development and execution of a collaborative strategy focused on restoring forests to their natural conditions, including encouraging ecological, economic sustainability, leveraging local resources with national and private resources, facilitating the reduction of wildfire management costs, and demonstrating that ecological restoration techniques achieve forest health objectives and use of forest restoration byproducts can offset treatment costs while benefiting local rural economies and improving forest health. (*See* Section Title IV, Section 4001, *the Omnibus Public Lands Management Act of 2009*).

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The selection of the CNF as a recipient, and its early success in the program, could serve as a model for other selected forests. In particular, supporting existing, proven facilities, such as those located in the CNF, before diverting funds to newer facilities that are untested will only add to the CFLRP's credibility and program success.

It is an honor and privilege for me to support the Colville National Forest. And, I urge you to give the CNF's application every consideration possible. Please do not hesitate to contact me if you have any questions.

Sincerely,

Cathy McMorris Rodgers

WASHINGTON STATE DEPARTMENT OF
Natural Resources
Peter Goldmark - Commissioner of Public Lands

Caring for
your natural resources
... now and forever

May 5, 2010

Mary Wagner, Regional Forester
Pacific Northwest Region
333 SW First Avenue
Portland, OR 97204-3440

Dear Ms. Wagner:

The Washington State Department of Natural Resources (DNR) has had a record of coordination and collaboration with the Colville National Forest and the Pacific Northwest Region that extends to a wide array of natural resource management areas. DNR supports the proposal that is being submitted for the Collaborative Forest Landscape Restoration Program by the Colville National Forest since many of the same issues and interests are served by the both agencies.

We believe the Colville National Forest CFLRP proposal will be important to meeting the needs of the forest products industry and the efforts to sustain jobs and infrastructure. Without this infrastructure, DNR and the Forest Service would find it impossible to meet our respective resource management objectives. DNR looks forward to the opportunities that a successful funding award for the CFLRP will mean to Northeast Washington, and the development of congruent land management objectives between our agencies.

Uncharacteristic wildfire and forest health hazards are two such objectives. As you know, these events do not recognize jurisdictional boundaries and comprehensive approach to implementing restoration strategies is a necessary action. The State of Washington has gone so far as to formally acknowledge this need in our Forest Health statute (RCW 76.06). Actions planned for implementation on DNR state trust lands and through DNR-administered State & Private Forestry program actions on private lands that are congruent to those on the Colville National Forest have been included in the proposal toward these ends.

Thank you for your careful consideration of the Colville National Forest CFLRP proposal.

Sincerely,

Loren Torgerson
Northeast Region Manager

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EQUAL OPPORTUNITY EMPLOYER