CFLR Project (Name/Number): Northeast Washington Forest Vision 2020 (21)
National Forest(s): Colville National Forest

Match and leveraged funds:

The NEW Vision 2020 CFLR project generated $3,510,705 in match from Forest Service funds, stewardship credits, and partnership contributions for a total of $8,950,000. CFLR investments totaled $4,236,317. FY2016 funds brought the NEW Forest Vision 2020 project to a total of $21,264,635 in CFLR, HPRP, and matching funds. The life of project match is 58% CFLR/HPRP and 42% matching funds. The life-of-project match is expected to be reach 50% as projects progress from the planning stage to implementation.

a. FY16 Matching Funds Documentation

Fund Source – (CFLN/CFLR Funds Expended)	Total Funds($) Expended in Fiscal Year 2016
CFLN2115 CFLN2116	$393,702 $1,986,859

This amount should match the amount of CFLR/CFLN dollars obligated in the PAS expenditure report. Include prior year CFLN dollars expended in this Fiscal Year.

Fund Source – (Funds expended from Washington Office funds (in addition to CFLR/CFLN) (please include a new row for each BLI))	Total Funds($) Expended in Fiscal Year 2016
NFWF2116	$480,825
WFHF2114	$464,700
NFTM2115	$910,231

This value (aka carryover funds or WO unobligated funds) should reflect the amount expended of the allocated funds as indicated in the FY16 program direction, but does not necessarily need to be in the same BLIs or budget fiscal year as indicated in the program direction.

Fund Source – (FS Matching Funds (please include a new row for each BLI))	Total Funds ($) Expended in Fiscal Year 2016
SSCC	$79,291
WFHF	$22,148
Joint Chief's Landscape Restoration Project	$248,195
Burned Area Emergency Response Rehab (See Item 9)	$1,986,296
BDBD	$126,082
Employee matching time on CFLR projects charged to non-CFLR job codes	$110,973

This amount should match the amount of matching funds obligated in the gPAS expenditure report, minus the Washington Office funds listed in the box above and any partner funds contributed through agreements (such as NFEX, SPEX, WFEX, CMEX, and CWFS) listed in the box below.

Fund Source – (Funds contributed through agreements)	Total Funds Expended in Fiscal Year 2016($)
Rocky Mountain Elk Foundation	$5,000
Northwest Youth Corp	$119,770

Fund Source – (Funds contributed through agreements)	Total Funds Expended in Fiscal Year 2016($)
Kettle Range Conservation Group	$8,654

*Please document any partner contributions to implementation and monitoring of the CFLR project through an income funds agreement (**this should include partner funds captured through the gPAS job reports** such as NFEX, SPEX, WFEX, CMEX, and CWFS). Please list the partner organizations involved in the agreement. Partner contributions for Fish, Wildlife, Watershed work can be found in WIT database.*

Fund Source – (Partner In-Kind Contributions)	Total Funds Expended in Fiscal Year 2016($)
Range Permittees	$25,455
Forest Inventory and Analysis	$67,333
Washington Department of Fish and Wildlife	$97,100
Biodiversity Research Institute	$600
Ginger Gumm	$600
Washington Department of Transportation	$50,400
Washington State University	$500
Colville Confederated Tribe	$100,000
National Park Service	$11,715

Total partner in-kind contributions for implementation and monitoring of a CFLR project. Please list the partner organizations that provided in-kind contributions.

For Contracts Awarded in FY16:

Service work accomplished through goods-for services funding within a stewardship contract (for contracts awarded in FY16)	Totals
Total revised non-monetary credit limit for contracts awarded in FY16	$467,340

Note: revised non-monetary credit limits for contracts awarded prior to FY16 were captured in the FY15 CFLR annual report last year

b. Please provide a narrative or table describing leveraged funds in your landscape in FY2016 (one page maximum).

Tribal lands are within the CFLR boundary. An estimate of the work done on tribal lands is given below.
Suggested Format:

Description of item	Where activity/item is located or impacted area	Estimated total amount	Forest Service or Partner Funds?	Source of funds
Fuel reduction thinning for wildfire protection and post-fire flood mitigation	Tribal land within CFLR landscape	$350,000	Partner Funds	Colville Confederated Tribes

Description of item	Where activity/item is located or impacted area	Estimated total amount	Forest Service or Partner Funds?	Source of funds
Fuel reduction thinning and prescribed fire	State Land Adjacent to the FS Lands in the CFLR landscape	$155,485	Partner Funds	Washington Department of Fish and Wildlife

2. Please tell us about the CFLR **project's progress to date in restoring a more fire-adapted ecosystem as described in the project proposal**, and how it has contributed to the wildland fire goals in the *10-Year Comprehensive Strategy Implementation Plan*. This may also include a brief description of the current fire year (fire activity that occurred in the project area) as a backdrop to your response (please limit answer to one page). ***Where existing fuel treatments within the landscape are tested by wildfire, please include a summary and reference the fuel treatment effectiveness report.***

The Three Rivers and Republic Ranger Districts on the Colville National Forest (NF) successfully capitalized on optimal burning conditions for prescribed fires during spring and late summer, 2016. The districts were able to accomplish some critical burns that had been backlogged a few years due to unfavorable prescribed fire conditions in previous seasons, as well as complete some burns that had just 'come on the books.' Objectives met on the burns varied from primary hazardous fuels reduction, fire reintroduction, slash disposal, and big game habitat improvement in partnership with Rocky Mountain Elk Foundation (RMEF) (Figs. 1 and 2). The objectives tier directly towards returning our landscape to a more fire-adapted ecosystem.

After the historic wildfire season of 2015, the Forest had a heightened emphasis on taking advantage of prescribed fire opportunities, and CFLR funding was most significant towards our success. In addition, we were able to essentially combine the CFLR funding with other funding sources to increase capacity to conduct burning by bringing in out of area fire support. Aside from CFLN and WFHF, other sources included funding from the NE Washington Joint Chiefs' Landscape Restoration Partnership initiative and RMEF grants. Thus, the potpourri of funding provided us an interagency mix of fire resources supporting our local personnel on many of our prescribed fires that included Interagency Hotshot Crews, Washington Department of Natural Resources (DNR) crews, and forestry students from the Job Corps.

The Forest successfully completed a number of other prescribed fires within and outside of the CFLR project area. A total of 544 acres of prescribed fire were split across several different CFLR units and planning areas. The treatments were critical burn acres due to their strategic locations and objectives of reducing hazardous fuels and completing slash reduction. The previous few years we had experienced narrow and limited prescribed fire windows, and thus many of the acres had been backlogged. The burns

demonstrated our ability to combine CFLR and Joint Chief's funds to bring in outside assistance and complete this critical burning at the same time we were conducting our larger, landscape prescribed fires.

Figure 1. Dense vegetation in Paradise 90 before prescribed burn treatment.

Figure 2. Paradise 90 after successful prescribed burn treatment.

The fuels program in the CFLR project area is focused on a suite of fuel treatments aimed at reducing hazardous fuels and improving forest health. Fuel reduction activities range from hand and machine piling, pre-commercial thinning for ladder fuel reduction, and pile burning. Many of the activities are accomplished through service contracts that aid on-Forest capacity. The treatments are placed strategically and often they are positioned to improve defensible space along road corridors and property boundaries. The work is done typically in conjunction with commercial harvest treatments under Stewardship Contracts that further enhance our capacity for forest restoration efforts.

DNR Pilot Burn Project in CFLRP

One of the projects, Paradise 90, was a showcase RMEF landscape burn and it was part of Washington DNR's Pilot Burn Project (Figs. 1, 2 and 3). For the first time in nearly 30 years, Washington DNR's Smoke Management Division is considering a change that would 'loosen' some of their stricter requirements for approving prescribed burns. The Pilot Burn Project allows fire/fuels staff a 24-hour advance notice of burn approval, fully informs the public, monitors fuels and stand conditions before and after burning, monitors smoke and air quality, and makes recommendations for updating the DNR Smoke Management Plan (Washington Prescribed Fire Council 2016). The DNR selected several Pilot projects on Forest Service and State lands as case studies and tested the proposed mandate changes this FY. The Forest partnered with the Northeast Washington Forestry Coalition (NEWFC), the same organization that we collaborate with on CFLN projects, and the Pacific Northwest (PNW) Research Station to place smoke monitors and layout

fuels plots to help provide information to the DNR. A determination on the proposed changes will be made soon, but the opportunity alone also has enhanced our relationship with DNR smoke managers.

Figure 3. Paradise 90 Aerial Ignition, September 2016

3. **What assumptions were used in generating the numbers and/or percentages you plugged into the TREAT tool**? Information about Treatment for Restoration Economic Analysis Tool inputs and assumptions available here – Restoration documents cflrp TREAT User Guide 2015 1005.

The majority of woody material (about 78%) harvested in the NEW Forest Vision 2020 area was purchased by a local sawmill, Vaagens Brother's Lumber. They in turn may sell the larger material (about 10%) to the local veneer and plywood manufacturer, Boise Cascade. Vaagens Brother's Lumber is also associated with the paper/pulp mill and a small percentage (3%) of the material may go to that mill. The Forest also completed some small post and pole sales in the local area. A remaining 5% of the material is expected to end up at the Avista Kettle Falls Generating Station. The percentages are the similar for both CFLN and non-CFLN projects across the Forest.

FY2016 Jobs Created/Maintained (FY16 CFLR/CFLN/ WO carryover funding):

FY2016 Jobs Created/Maintained (FY16 CFLR/CFLN/ WO carryover funding)	Jobs (Full and Part-Time) (Direct)	Jobs (Full and Part-Time) (Direct)	Labor Income ($) (Direct)	Labor Income ($) (Total)
Timber harvesting component	45	72	3,597,149	5,003,541
Forest and watershed restoration component	24	28	487,934	661,350
Mill processing component	71	215	4,427,458	11,408,953
Implementation and monitoring	38	46	1,224,818	1,543,580
Other project Activities	3	4	117,660	179,611
TOTALS:	180	365	$9,855,019	$18,797,035

FY2016 Jobs Created/Maintained (FY16 CFLR/CFLN/ WO carryover and matching funding):

FY2016 Jobs Created/Maintained (FY16 CFLR/CFLN/ WO carryover and matching funding)	Jobs (Full and Part-Time)	Jobs (Full and Part-Time)	Labor Income ($)	Labor Income ($)
Timber harvesting component	45	72	3,597,149	5,003,541
Forest and watershed restoration component	42	48	669,979	951,631
Mill processing component	71	215	4,427,458	11,408,953
Implementation and monitoring	48	60	1,703,809	2,147,230
Other project Activities	3	4	128,071	195,503
TOTALS:	208	399	$10,526,465	$19,706,857

Values obtained from Treatment for Restoration Economic Analysis Tool (TREAT) spreadsheet, "Impacts-Jobs and Income" tab. Spreadsheet and directions available at http://www.fs.fed.us/restoration/CFLR/submittingproposals.shtml#tools.

4. **Describe other community benefits achieved and the methods used to gather information about these benefits**. How has CFLR and related activities benefitted your community from a social and/or economic standpoint? (Please limit answer to two pages).

The Kettle Face North and Kettle Face South Stewardship projects were two CFLR project accomplishments. The Kettle Face project areas covered portions of the Renner Lake, Boyds, Nancy Creek, and C.C. Mountain cattle range allotments. The treatments greatly benefitted livestock producers who hold a Term Grazing Permit on the Colville NF from both an economic and logistic standpoint. The livestock producers who manage livestock under the Term Grazing Permits in the area are part of the local community. Projects like Kettle Face North and South help sustain grazing on the national forest and that in turn provides economic diversity and stability to the local community.

Figure 4. Vegetation treatments near Merkel Spring Water Development resulted in increased availability of grass, forbs, and browse for livestock.

The Kettle Face treatments resulted in more open timber stands where there is a greater amount of herbaceous vegetation in the understory (Fig. 4). Converting densely forested areas to more open stands creates transitory rangelands that provide mid-term grazing lands and provide forage to livestock and wildlife. The more open stands result also in greater gains during the grazing season as livestock have the ability to seek out productive foraging areas in the uplands.

An increase in transitory range in the uplands coincides with greater livestock distribution across the landscape instead of them being bunched up and competing for forage in small areas. The vegetation and fuels treatments have created increased numbers of foraging areas and higher quality foraging areas in the uplands. So the livestock not only have better foraging opportunities due to the increased production of forage but also have the ability to move across the landscape with greater efficiency. The duration, intensity, and frequency of how livestock utilize the uplands is much more efficient because of better access and the availability of herbaceous growth where it would not have been available if treatments were not done on densely treed areas.

Figure 5. Reconstruction of the Merkel Spring Water Development

A good example of how vegetation treatments work well with range management is the improved livestock distribution which occurred Merkel Spring Water Development on the Boyds range allotment (Fig. 5). The water development was reconstructed after thinning treatments were completed on the allotment within the Jackknife pasture (Fig. 5). The Jackknife pasture has not had much use in the last decade however livestock started using it soon after the treatments. The influx in herbaceous forage and the availability of a water source promoted good upland distribution with livestock within this allotment. Livestock spent less time concentrated in groups in a smaller portion of the allotment. The forage resource was better utilized and there were fewer impacts to the riparian areas.

5. Based on your project monitoring plan, **describe the multiparty monitoring process. What parties (who) are involved in monitoring, and how? What is being monitored? Please briefly share key broad monitoring results and how results received to date are informing subsequent management activities (e.g. adaptive management), if at all.** What are the current weaknesses or shortcomings of the monitoring process? (Please limit answer to two pages. Include a link to your monitoring plan if it is available).

Several NEW Forest Vision 2020 partners (e.g., universities, collaborative, contractors, industry) continued implementation of the monitoring plan. A number of the monitoring projects produced results this FY. Monitoring results are reported below for a) economics, b) baseline stand reference conditions, c) restoration treatments, d) post-wildfire, and e) treatment effects to wildlife.

Economics

Economic effects of 2015 forest restoration activities on the NEW Forest Vision 2020 Projects were monitored by Forest Econ Inc. (McKetta et al. 2016). The CFLR project covers two counties: Ferry and Stevens. Pend Oreille County is the third county encompassed by the Colville NF. Much of the total annual spending (~40%) occurred in Ferry County. However, the most direct annual spending (~60%) occurred in Stevens County because the bulk of the operational resources are based there. Base period CFRLP spending generated 211 regional jobs and $8.8 million of local income, and from both indicators used by the authors the spending is about 1% of the total regional economy. The spatial distribution of total effects was skewed away from the CFLRP's physical location because primary processing and trade sectors are concentrated further east (McKetta et al. 2016). The authors found that Ferry County only accrued 18% of jobs and 19% of income, and that total economic effects shifted slightly to Pend Oreille County (9% of jobs, 15% of income) which had almost no CFLRP direct spending, and mostly to Stevens County (73% of jobs, 66% of income). Estimates of current economic reality generally agree with projections made in the original NEW Forest Vision 2020 proposals (McKetta et al. 2016). However the TREAT analysis reported more jobs created than the McKetta analysis.

The Bureau of Business and Economic Research at the University of Montana was contracted to conduct a study on the utilization of local contractors through the NEW Forest Vision 2020 CFLRP project (McIver, C. 2015). The purpose of the study was aimed to identify and measure the opportunities and benefits the CFLRP project is bringing to communities in the region. The author found that service contract records suggested the program had not had the intended impact of increasing the share of restoration investments reaching local communities and economies. It was also found that CFLRP spending represented between 31% and 58% of annual restoration spending on the Colville NF between 2012 and 2015, and the share of contracts and contract dollars going to local businesses was greater for non-CFLRP contracts than CFLRP contracts (about 20% vs. 17%). The greatest gains came from Stewardship contracts, for which 41% of contracts awarded through the CFLRP went to local businesses, compared to only 22% for all non-CFLRP stewardship contracts (McIver, C. 2015). The author determined that out-of-State businesses consistently garnered the majority of restoration contract value (between 55% and 63%) while all of the timber volume sold through the CFLRP was purchased by local mills in Colville and Kettle Falls. Of the nearly 140 million board feet (MMBF) awarded, all utilized stewardship authorities allowing the forest to retain the value from the timber and reinvest it in further restoration activities. The timber receipts for the ten sales were valued at $13.7 million (McIver C. 2015). The author stated that in addition to the revenue generated, the mills likely worked with local logging and forestry companies to conduct the suite of timber harvest and restoration activities included in the integrated stewardship contracts creating additional local benefits.

Lastly, the author determined that the Forest Service used partnership agreements to engage a variety of non-federal entities and leveraged federal dollars to accomplish restoration in the NEW Forest Vision 2020 project area. The partners all brought additional cash and in-kind resources to the table and included state agencies, universities and regional or national nonprofits. It was determined that partnerships with State agencies were likely for the purposes of meeting ecological objectives, universities were mostly engaged

to meet project and collaborative monitoring objectives, and nonprofits were used to accomplish work on the ground through the Northwest Youth Corps and national organizations interested in wildlife habitat. However, it was found that only one of the partners engaged was local to the impact area.

Stand-Level Baseline Reference Conditions

A project was undertaken by University of Washington researcher Derrick Churchill and Forest staff to establish baseline reference conditions in order to establish clear, quantitative metrics of historical forest conditions. The metrics are being used to evaluate the success of restoration treatments, as well as to guide the development of restoration prescriptions. Historical forest structure and pattern was derived across the four primary potential vegetation types by surveying in old stands without a recent harvest history on the Colville NF. Conditions were then reconstructed to the year 1890. Previous to this work, no stand-level reference conditions existed for forests on the Colville NF. The baseline plots provided guidance for designing stand treatments to achieve desired forest density, structure, composition, and spatial pattern.

a) **Monitoring of Recent Restoration Treatments**

Churchill also developed a QuickMap forestry application to rapidly assess forest structure, composition, and spatial pattern of treatments and compare it to the baseline reference conditions (Feldkamp, L. 2016). Colville NF staff used the application with Churchill to collect detailed monitoring information on how closely restoration-oriented silvicultural prescriptions and their implementation are meeting the range of desired conditions. Results indicate that all treatments met density and composition targets. However, early treatments that were designed primarily for fuels reduction lacked the openings and larger clumps found in the reference sites. More recent treatments were found to have met the desired targets.

b) Post-Fire Treatment Monitoring

Figure 6. Monitoring of the effects of thinning treatments on vegetation and nutrition for deer.

The University of Washington and the Colville NF developed and implemented an adaptive monitoring approach to test the efficacy of forest restoration treatments in the NEW Forest Vision 2020 project area. In one of the monitoring sites that had been measured before the wildfires of 2015 and it had burned at 99% forest mortality. The NEWFC collaborative group recognized this as a unique opportunity to have pre- and post-wildfire monitoring on the plot and they worked with Colville NF staff to design a demonstration post-wildfire salvage harvest treatment to test. The treatment was intended to mimic ecological spatial patterns of forest stands (e.g, skips and gaps). The crew installed intensive measurement plots this field season and the treatment was conducted this fall. Re-measurements are planned for 2017. The opportunistic project will allow the Colville NF and partners to monitor and to provide better understanding of the effects of salvage harvests on future fuel loading and vegetation recovery after a high severity fire. The results will be used to guide post-fire work after future wildfires.

Wildlife Forage

Washington State University students monitored effects of commercial thinning treatments on the quality, quantity and composition of understory vegetation; nutrient intake and diet quality for deer; and overall nutritional carrying capacity for deer within the NEW Vision 2020 CFLRP treatment area. The students measured understory vegetation and deer nutrition in stands that range in canopy cover and time since thinning across the ponderosa pine/Douglas fir forest communities throughout the CFLRP area. They also monitored vigilance and foraging behavior between mule and white-tailed deer that were tame and brought in for the study from Washington State University. Social and foraging behavior of deer in the forest stands will also be monitored.

How the Monitoring Reports Connect with Each Other

Initial results showed that stands within 15 to 20 years of treatment are better for forage than after 20 years when fuel loadings and canopy cover has increased. That makes sense since fire monitoring has shown that our fuel treatments last between 15 and 20 years. We are starting to paint a picture of the need to treat certain stands every 15 to 20 years for fuels and wildlife forage needs. By the end of the CFLR monitoring program we should have a complete picture on how often stands should be treated, the spatial pattern of the treatments, and the overall effect on the landscape.

6. **FY 2016 accomplishments**.

Performance Measure	Unit of measure	Total Units Accomplished	Total Treatment Cost ($)	Type of Funds (CFLR, Specific FS BLI, Partner Match)
Acres of forest vegetation established FOR-VEG-EST	Acres	351.0	30,000	CFLN
Acres of forest vegetation improved FOR-VEG-IMP	Acres	760.0	30,000	CFLN / WFHF
Manage noxious weeds and invasive plants INVPLT-NXWD-FED-AC	Acre	2,888.0	36,000	CFLN
Highest priority acres treated for invasive terrestrial and aquatic species on NFS lands INVSPE-TERR-FED-AC	Acres	0		
Acres of water or soil resources protected, maintained or improved to achieve desired watershed conditions. S&W-RSRC-IMP	Acres	1,229.8	87,000	CFLN, PTNR, WFSU
Acres of lake habitat restored or enhanced	Acres	65.8	25,000	CFLN, PTNR

Performance Measure	Unit of measure	Total Units Accomplished	Total Treatment Cost ($)	Type of Funds (CFLR, Specific FS BLI, Partner Match)
HBT-ENH-LAK				
Miles of stream habitat restored or enhanced HBT-ENH-STRM	Miles	8.2	100,000	CFLN
Acres of terrestrial habitat restored or enhanced HBT-ENH-TERR	Acres	14,474.0	1,300,000	BDBD, CFLN, CWKV, NFRG, NFWF, NFXN, WFHF, WFSU
Acres of rangeland vegetation improved RG-VEG-IMP	Acres	0 (During data entry, the CFLR was not selected)	25,000	CFLN (25 acres were improved, but not recorded correctly)
Miles of high clearance system roads receiving maintenance RD-HC-MAIN	Miles	85	120,000	CFLN, CMRD, CWF2, SSCC
Miles of passenger car system roads receiving maintenance RD-PC-MAINT	Miles	70.9	150,000	CFLN, PTNR
Miles of road decommissioned RD-DECOM	Miles	0 (During data entry, the CFLR was not available to be selected. This was not discovered until after the PAS reporting deadline.)	84,000	4 miles were completed, but they did not get counted in PAS due to changes with the database of record. CFLN, SSCC
Miles of passenger car system roads improved RD-PC-IMP	Miles	12	800,000	CFLN
Miles of high clearance system road improved RD-HC-IMP	Miles	8.1	120,000	CFLN, CWF2, SSCC

Performance Measure	Unit of measure	Total Units Accomplished	Total Treatment Cost ($)	Type of Funds (CFLR, Specific FS BLI, Partner Match)
Number of stream crossings constructed or reconstructed to provide for aquatic organism passage STRM-CROS-MTG-STD	Number	0		
Miles of system trail maintained to standard TL-MAINT-STD	Miles	1.8	25,000	CFLN, PTNR
Miles of system trail improved to standard TL-IMP-STD	Miles	150.4	50,000	CFLN, PTNR
Miles of property line marked/maintained to standard LND-BL-MRK-MAINT	Miles	0 (During data entry, the CFLR was not selected)	330,000	52 miles were completed, but they did not get counted in PAS. CFLN
Acres of forestlands treated using timber sales TMBR-SALES-TRT-AC	Acres	2,273.0	750,000	CFLN, CWK2, NFTM, SSSS, WFHF
Volume of Timber Harvested TMBR-VOL-HVST	CCF	0		
Volume of timber sold TMBR-VOL-SLD	CCF	17,027	46,000	CFLN, CWK2, NFTM, SSSS
Green tons from small diameter and low value trees removed from NFS lands and made available for bio-energy production BIO-NRG	Green tons	0		
Acres of hazardous fuels treated	Acre	28,473.6	1,850,000	CFLN, NFVW

Performance Measure	Unit of measure	Total Units Accomplished	Total Treatment Cost ($)	Type of Funds (CFLR, Specific FS BLI, Partner Match)
outside the wildland/urban interface (WUI) to reduce the risk of catastrophic wildland fire FP-FUELS-NON-WUI				
Acres of wildland/urban interface (WUI) high priority hazardous fuels treated to reduce the risk of catastrophic wildland fire FP-FUELS-WUI	Acres	25,479.6	1,750,000	CFLN, SSCC, SSSS, WFHF
Number of priority acres treated annually for invasive species on Federal lands SP-INVSPE-FED-AC	Acres	0		
Number of priority acres treated annually for native pests on Federal lands SP-NATIVE-FED-AC	Acres	0		

Units accomplished should match the accomplishments recorded in the Databases of Record. Please include the type of Funds (CFLR, Specific FS BLI, Partner Match) if you have accurate information that is readily available. Please report each BLI on a separate line within a given performance measures' "Type of Funds" box. .

7. FY 2016 accomplishment narrative – Summarize key accomplishments and evaluate project progress not already described elsewhere in this report. (Please limit answer to three pages.)

The fifth year of implementation was completed in the NEW Forest Vision 2020 project. Partners and Forest Service staff comprised a dedicated team that accomplished numerous restoration projects. The ten-year priorities of the project are to increase ecosystem resilience in light of disturbance, restore old growth structure and function, and reduce wildfire risk and wildfire management costs. The Colville NF plans to accomplish the priorities through the thinning of small trees and reduction of ladder fuels, increasing the number of fire breaks throughout the project landscape, employing fire as a resource management tool, and establishing a low fuels buffer on the northern boundary of the Colville

Confederated Tribes Reservation. The following summarizes accomplishments captured in PAS and those that were not correctly coded to the CFLR project in time for the PAS report pull.

Accomplishments

- We have ten active large-scale ecosystem restoration projects that are intended to reduce fuel loading and restore the forest to a resilient level. The projects are in various stages from marking and layout to active harvest, and from harvest to follow-up fuels treatments. About 80% (343,000 ac.) of the approximately 430,000 acres that will be analyzed for treatment over the life of the project are in an active planning or implementation phase.
- In FY2016, 17,027 ccf of timber was awarded in the CFLR area. The total awarded so far is 208,995 ccf. The total is 52% so far of the Vision 2020 project goals for timber volume.

Figure 7. Decommissioned road: it's hard to believe there was a road there!

- A total of 53,953 acres of fuels were treated to reduce the risk of catastrophic wildfire within the NEW Forest Vision 2020 landscape in FY2016. About 53% (28,474 ac.) were non-WUI acres and 47% (25,480 ac.) were WUI acres. The total area treated after five years of implementation is 80,894 acres (30,955 non-WUI and 49,939 acres WUI). The total area treated is about 60% of the 136,000 acres that were estimated to be treated in the proposal.
- Four miles of roads were decommissioned (Fig. 7).
- The Northwest Youth Corp partnered with the Colville NF on range improvement projects, fuels reduction projects, erosion control, and reduction of environmental effects of recreation from use of trails and camp sites.
- Eight miles of stream were improved this FY. The five year stream improvement total is 52 miles. The total is greater than the initial goal of 40 miles of stream improvement. The work was accomplished through road improvements that reduced sedimentation, restoration work on recreation sites by the Northwest Youth Corp, and Burned Area Emergency Response (BAER) rehabilitation work.
- About 2,888 acres of noxious weeds were treated in FY2016. A total of 8,114 acres have been treated to date. We are at nearly 90% of our goal of treating 9,000 acres.
- We reconstructed or maintained 152 miles of trails and 176 miles of roads to reduce effects to aquatic species across the NEW Forest Vision 2020 area. The total of trails treated is at 36% (1,816

miles) so far and road reconstruction is at 120% (1,105 miles) of the goal. In addition, two roads along redband trout habitat were reconstructed to reduce erosion and to improve fish habitat.

8. *Review the spatial information sent to you by the Washington Office after gPAS closes out on October 31*

- If the 2016 footprint estimate is consistent and accurate, please confirm and copy below.
- If it does NOT appear accurate, describe the total acres treated in the course of the CFLR project below (cumulative footprint acres; not a cumulative total of performance accomplishments)?

Fiscal Year	Total number of acres treated (treatment footprint)
Cumulative Total in FY16	73,146 acres
FY10, FY11, FY12, FY13, FY14, FY15, and FY16 (as applicable- projects selected in FY2012 may will not have data for FY10 and FY11; projects that were HPRP projects in FY12, please include one number for FY12 and one number for FY13 (same as above))	FY12: 5,706 acres FY13: 8,413 acres FY14: 4,971 acres FY15: 6,296 acres FY16: 47,760 acres

If you did not use the database estimate, please briefly describe how you arrived at the total number of footprint acres: what approach did you use to calculate the footprint?

The database estimate appears accurate.

9. **Describe any reasons that the FY 2016 annual report does not reflect your project proposal, previously reported planned accomplishments, or work plan.** Did you face any unexpected challenges this year that caused you to change what was outlined in your proposal? (please limit answer to two pages).

The FY 2016 program will continue to work under the guidance of the original CFLR project proposal, the Colville NF Restoration Strategy, and with the input of our collaborators. The wildfires of 2015 and 2016 were beneficial in areas where they burned at a low or moderate intensity. The beneficial acres were counted in our hazardous fuels treated acres and terrestrial habitat improvement acres.

The BAER treatments to reduce erosion resulted in soil and water improvement acres. The funding from BAER for this soil stabilization work was counted at a match since it was for restoration of the landscape. The BAER treatments of wood mulch and straw placement on volcanic ash cap soils prevented the soils from eroding away. The productive volcanic ash cap soils on the Colville NF were deposited, and later

developed, by an event that took place approximately 7,700 years ago and if the soils were lost due to erosion, the site may not recover to pre-fire conditions in our lifetime (Robertson, et al. 2015). The authors noted that the purpose of the mulch and straw was to protect soils on steeper slopes from raindrop impaction, to reduce the event energy at the watershed-head source areas, reduce hydrophobicity, increase water infiltration, minimize soil erosion, and promote re-vegetation from seed germination and seedling survival. In addition, the BAER treatments in the CFLR project included removal of poorly placed and sized culverts, and road rehabilitation. Wood was placed also across steep slopes to minimize soil erosion. Without the BAER treatments we would have had damage to streams, decreased soil productivity, and increased sedimentation from road and trail washouts. The soil and road stabilization projects were consistent with the CFLR objectives of restoration and the original NEW Vision 2020 proposal due to the landscape-scale nature of the treatments.

10. Planned FY 2018 Accomplishments[1]

In an effort to simplify reporting, we've reduced the number of performance measures we are asking you for here. However, the ones below are still needed for our annual budget request to Congress. In our justification to Congress for continued funding each year, we have to display planned accomplishments for the coming year.

Performance Measure Code	Unit of Measure	Planned Accomplishment	Amount ($)
Acres of forest vegetation established FOR-VEG-EST	Acres	400	40,000
Manage noxious weeds and invasive plants INVPLT-NXWD-FED-AC	Acre	2,000	40,000
Miles of stream habitat restored or enhanced HBT-ENH-STRM	Miles	10	1,500,000
Acres of terrestrial habitat restored or enhanced HBT-ENH-TERR	Acres	2,000	85,000
Miles of road decommissioned RD-DECOM	Miles	5	90,000
Miles of passenger car system roads improved RD-PC-IMP	Miles	8	1,500,000

[1] Please note that planned accomplishments are aggregated across the projects to determine the proposed goals for the program's outyear budget justification. These numbers should reflect what is in the CFLRP work plan, with deviations described in question 11.

Performance Measure Code	Unit of Measure	Planned Accomplishment	Amount ($)
Miles of high clearance system road improved RD-HC-IMP	Miles	8	300,000
Volume of timber sold TMBR-VOL-SLD	CCF	20,000	1,170,000
Green tons from small diameter and low value trees removed from NFS lands and made available for bio-energy production BIO-NRG	Green tons	6,000	70,000
Acres of hazardous fuels treated outside the wildland/urban interface (WUI) to reduce the risk of catastrophic wildland fire FP-FUELS-NON-WUI	Acre	500	100,000
Acres of wildland/urban interface (WUI) high priority hazardous fuels treated to reduce the risk of catastrophic wildland fire FP-FUELS-WUI	Acres	5,000	700,000

Please include all relevant planned accomplishments, assuming that funding specified in the CFLRP project proposal for FY 2018 is available. Use actual planned funding if quantity is less than specified in CFLRP project work plan.

11. Planned accomplishment narrative and justification if planned FY 2017/18 accomplishments and/or funding differs from CFLRP project work plan (no more than 1 page):

The FY 2017/18 program does not differ from the project work plan in the original project proposal, the Colville NF Restoration Strategy, and the input of our collaborators. The restoration and other work related to the 2015 wildfires has been completed so that will not impact the work in FY2017/2018.

12. Please include an up to date list of the members of your collaborative if it has changed from the list you submitted in the FY15 report (name and affiliation, if there is one). If the information is available online, you can simply include the hyperlink here. If you have engaged new collaborative members this year, please provide a brief description of their engagement.

The collaborative list has not changed.

13. Did you project try any new approaches to increasing partner match funding in FY2016 (both in-kind contributions and through agreements)? (no more than one page):

- The Forest is working with the Colville Confederated Tribes on a Tribal Forest Protection Act project within the CFLR project area. The Tribe has brought in $100,000 as a partner in the project.

- The Forest is partnering also with the Colville Confederated Tribes along with Washington Department of Fish and Wildlife and others on a largescale monitoring effort for salmonids in the Sanpoil River.

- The NEWFC collaborative group brought in partners to study post-disturbance treatments following a largescale wildfire.

- The Colville NF had more projects done in partnership with the Northwest Youth Corps (Fig. 8) than in past years. The Corps successfully helped us complete fuel reduction projects, water development reconstructions, and fencing during FY2016. The Corps helped greatly with the reconstruction of range improvements. With their help, we were able to pack building materials into some remote locations such as Columbia Spring in the Kettle Crest Trail. Wood post, wood rails, barbed wire, troughs, and other building materials were transported into remote locations where they could be used to reconstruct range improvements. The Corps was able to provide a valuable and much needed labor force to accomplish some of our biggest projects.

Figure 8. Northwest Youth Corps members at reconstructed Rattlesnake Spring Water Development.

The Corps camped out at the idyllic Swan Lake campground and enjoyed their meals in a CCC-era kitchen in the summer of 2016. Swan Lake is the highlight of a popular three-lake recreation area. A day at the 60-acre lake can be filled with boating, fishing, swimming, or hiking the lakeshore trail while an evening

can be spent by listening to the haunting calls of the nesting loons while sitting and telling stories by the campfire. The lakeshore and riparian area receives heavy recreation pressure because of its 25 campsites, a day use swim beach, a fishing dock, and lakeside trail. The Corps repaired environmental impacts caused by recreationists on this little gem of the forest. The lakeside trail, over two miles long, was treated to improve drainage and reduce erosion (Fig. 9). A portion of the trail was relocated out of a wetland. The Corps built check dams at the swimming areas to stop the erosion at the vegetation line (Fig. 10). Aggregate was placed to firm up the trail around the most heavily used areas. The aggregate was kept in place by retaining walls which also limit off-trail travel. One of the main objectives of the project was to deter user-created pathways. Old pathways were obliterated, check dams were installed to control erosion, and topsoil was brought in to encourage revegetation (Fig. 11). Most importantly, the Corps had an opportunity to hone their skills and gain an appreciation for the forest, and the satisfaction of knowing that it was in much better shape at the end of their tour.

Figure 9. Trails were improved with fencing and borders that limit the amount of disturbance to surrounding vegetation.

Figure 10. Check dams were installed to define the swim beach and reduce beach erosion. The topsoil in the check dams will facilitate revegetation.

Figure 11. About 600 feet of user-created pathways were obliterated (left), check dams were installed to reduce future erosion, top soil added to encourage revegetation (right), and slash spread to curtail future use.

References

Feldkamp, L. 2016. "Technology to the Rescue for Foresters in the Thick of It." http://blog.nature.org/science/2016/08/03/technology-to-the-rescue-for-foresters-in-the-thick-of-it/

McIver, C.P. 2015. Measuring the benefits of the Collaborative Forest Landscape Restoration Program for local communities in Northeast Washington FY2012-2015. University of Montana, Bureau of Business & Economic Research, Missoula, MT. 23 pp.

McKetta, C., Green, D., and Green, M.A. Economic effects of forest restoration in NE Washington: contributions of the Colville National Forest CFLRP. Forest Econ Inc., Moscow, ID. 28 pp.

Robertson, E., Danheiser, C, and Weems, S. 2015. Stickpin Fire BAER soils resource report. Colville National Forest. 29 pp.

14. **Media recap**. Please share with us any hyperlinks to videos, newspaper articles, press releases, scholarly works, and photos of your project in the media that you have available. You are welcome to include links or to copy/paste.

Landers, R. 2016. "Wildfire reforestation underway on Colville National Forest". The Spokesman-Review. 2016 may 23 wildfire reforestation underway Colville National Forest

Heflick, D. 2016. "Northeast WA Forest Vision 2020 Collaborative Restoration Project. 2016." Our initiatives habitats forests 2016 cflr factsheet Washington

Washington Prescribed Fire Council. 2016. "Forest Resiliency Burning Pilot". Put fire to work

Signatures:

Recommended by (Project Coordinator(s)): /s/Karen Honeycutt

Approved by (Forest Supervisor(s))[2]: /s/Rodney Smoldon

(OPTIONAL) Reviewed by (collaborative chair or representative): _____

[2] If your project includes more than one National Forest, please include an additional line for each Forest Supervisor signature.