Northeast Washington Forest Vision 2020 (CFLR021)

Colville National Forest

1. CFLRP Expenditures, Match, and Leveraged Funds:

a. FY21 CFLN and Matching Funds Documentation

Fund Source – (CFLN Funds Expended)	Total Funds Expended in Fiscal Year 2021
CFLN20	$226,265.37
CFLN21	$2,207,847.24
TOTAL	**$2,434,112.61**

This amount should match the amount of CFLN dollars spent in the FMMI CFLRP expenditure report. Include prior year CFLN dollars expended in this Fiscal Year. CFLN funds can only be spent on NFS lands.

Fund Source – (Forest Service Salary and Expense Match Expended)	Total Funds Expended in Fiscal Year 2021
NSCF21	$1,055,977.61
WSCF21	$427,371.44
TOTAL	**$1,483,349.05**

This amount should match the amount of matching funds in the FMMI CFLRP expenditure report for Salary and Expenses. Staff time spent on CFLRP proposal implementation and monitoring may be counted as CFLRP match – see Program Funding Guidance for details.

Fund Source – (Forest Service Discretionary Matching Funds)	Total Funds Expended in Fiscal Year 2021
CFCC2118	$101,518.94
CFCC2119	$826,824.19
CFCC2120	$750.00
CFCC2121	$5,718.80
SSCC2118	$532,668.77
SSCC2119	$255,502.30
SSCC2120	$2,789.17
GPT6AF21*	$1,981,644.00
GPN6AM21*	$131,420.00
CIP - 0672Q3307820*	$278,484.53
TOTAL	**$4,117,320**
*GAOA and CIP Funds were not coded with a match code, so they did not show up on the expenditure report. *$85,430 in NFWF was tagged in error on the expenditure report. The workplan was coded as CFLN, so all expenditures to NFWF were coded as CFLN.	

This amount should match the amount of matching funds in the FMMI CFLRP expenditure report, *minus* any partner funds contributed through agreements (such as NFEX, SPEX, WFEX, CMEX, and CWFS) which should be reported in the partner contribution table below. Per the Program Funding Guidance, federal dollars spent on non-NFS lands may be included if aligned with CFLRP proposal implementation within the landscape.

Fund Source – (Partner Match)	In-Kind Contribution or Funding Provided?	Total Estimated Funds/Value for FY21	Description of CFLRP implementation or monitoring activity	Where activity/item is located or impacted area
Northwest Youth Corps	☒ **In-kind contribution** ☐ **Funding**	**9,399**	4 Miles of fence line reconstruction over four weeks including logout, brushout, t-post replacement, wire splicing, wire replacement, wire stretching and wire attachment. * Prevented cattle entry and riparian grazing/trampling at Swan, Long, and Ferry Lakes	☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**
Tri-County Motorized Recreation Association	☒ **In-kind contribution** ☐ **Funding**	**4,987**	Approximately 30 miles of spot ditch cleaning, culvert cleaning, garbage collection, and water bar cleanout to prevent erosion.	☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**
Washington State Recreation and Conservation Office Recreation Site Grant	☒ **In-kind contribution** ☐ **Funding**	**26,665**	* Removed 78 forty-four-gallon bags of garbage from forest campsites and roadside ditches. * Contacted 82 groups regarding food storage, OHV use, Motor Vehicle Use Map interpretation, and dispersed camping/recreation opportunities and regulations. * Picked and removed 22 forty-four-gallon bags of knapweed and 9 bags of mullein at backcountry trailheads. * Removed nine tires from the forest. * Removed and cleaned-up 4 homemade toilet structures within the RCA.	☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**

Fund Source – (Partner Match)	In-Kind Contribution or Funding Provided?	Total Estimated Funds/Value for FY21	Description of CFLRP implementation or monitoring activity	Where activity/item is located or impacted area
			* Removed 190 down trees from roads and trailheads that were causing compaction and erosion as vehicles drove through the forest to get around the trees. * Disassembled and removed 33 user-built structures from the forest.	
Pacific Northwest Trail Association	☒ **In-kind contribution** ☐ **Funding**	**27,086**	About 29 miles of trail restoration and maintenance including drainage maintenance to prevent washouts, trailhead reconstruction to improve cross drainage, puncheon and turnpike construction.	☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**
BLM	☒ **In-kind contribution** ☐ **Funding**	**22,500**	Prescribed fire on 90 acres.	☐ **National Forest System Lands** ☒ **Other lands within CFLRP landscape:**
DFW	☒ **In-kind contribution** ☐ **Funding**	**110,000**	Prescribed fire on 440 acres.	☐ **National Forest System Lands** ☒ **Other lands within CFLRP landscape:**
Ferry County Chapter Backcountry Horseman	☒ **In-kind contribution** ☐ **Funding**	**5,137**		☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**
National Park Service	☒ **In-kind contribution**	**26,700**	**Prescribed Fire – 89 acres**	☐ **National Forest System Lands** ☒ **Other lands within CFLRP landscape:**

Fund Source – (Partner Match)	In-Kind Contribution or Funding Provided?	Total Estimated Funds/Value for FY21	Description of CFLRP implementation or monitoring activity	Where activity/item is located or impacted area
Evergreen Mountain Bike Alliance East	☒ **In-kind contribution** ☐ **Funding**	**3,196**		☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**
TOTALS	**Total In-Kind Contributions: $235,670** **Total Funding: $235,670**			

Total partner in-kind contributions for implementation and monitoring of a CFLR project across **all lands** within the CFLRP landscape. For CFLRP projects under the CFLRP Common Monitoring Strategy, note that this table addresses the core CFLRP common monitoring strategy question, "If and to what extent has CFLRP investments attracted partner investments across the landscapes?"

Service work accomplishment through goods-for services funding within a stewardship contract (for contracts awarded in FY21)	Totals
Total revised non-monetary credit limit for contracts awarded in FY21	$313,142.5
Revenue generated through Good Neighbor Agreements	**Totals**
GNA	$

Revised non-monetary credit limits should be the amount in contract's "Progress Report for Stewardship Credits, Integrated Resources Contracts or Agreements," the "Revised Non-Monetary Credit Limit," as of September 30. Additional information on the Progress Reports is available in CFLR Annual Report Instructions document.
Revenue generated from GNA should only be reported for CFLRP match if the funds are intended to be spent within the CFLRP project area for work in line with the CFLRP project's proposed restoration strategies and in alignment with the CFLRP authorizing legislation

2. Restoring Fire-adapted Ecosystems

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 wildfire risk reduction goals**.

FY2021 Overview

FY21 Activity Description (Agency performance measures)	Acres
Number of acres treated by prescribed fire	4,383
Number of acres treated by mechanical thinning	3,495
Number of acres of natural ignitions that are allowed to burn under strategies that result in desired conditions	0 (This summer's fires are counted towards 2022 acres because they were contained in FY 22.)
Number of acres mitigated to reduce fire risk	6,378

*acres treated by mechanical thinning and prescribed fire overlap. The total acres mitigated to reduce fire risk is lower than adding prescribed fire and mechanical thinning.

Two large wildfires (Bulldog Mountain and Mack Mountain) in the CFLR area this past summer (2021) were managed successfully using, primarily, an indirect containment strategy. This suppression strategy was determined as the best option to be successful at meeting key objectives of reducing firefighter and public risk and limiting the fires' impacts to private land values. Other benefits were realized as well in terms of less suppression costs and improved forest health.

Both Bulldog Mountain and Mack Mountain Fires started on August 5th from lightning. The broader fire situation was complex at that time:

- Numerous storms in the Region had just ignited hundreds of fires.
- Dozens of large fires had been burning for nearly a month across the west.
- Suppression resources and Incident Management Teams (IMTs) were scarce.
- Critical fire danger and record dry fuels conditions, along with national direction to suppress all fires, meant that managing a fire for resource benefit was not an option.

As local fire managers quickly deliberated, the following considerations quickly stood out that determined the indirect strategy for the two fires:

- limited access for firefighters, and high risk to conduct direct attack suppression actions
- minimal values to protect (minus private land values east of Bulldog Mountain Fire)
- location of 2015 fire scars as well as various fuel treatments
- relative POD boundaries

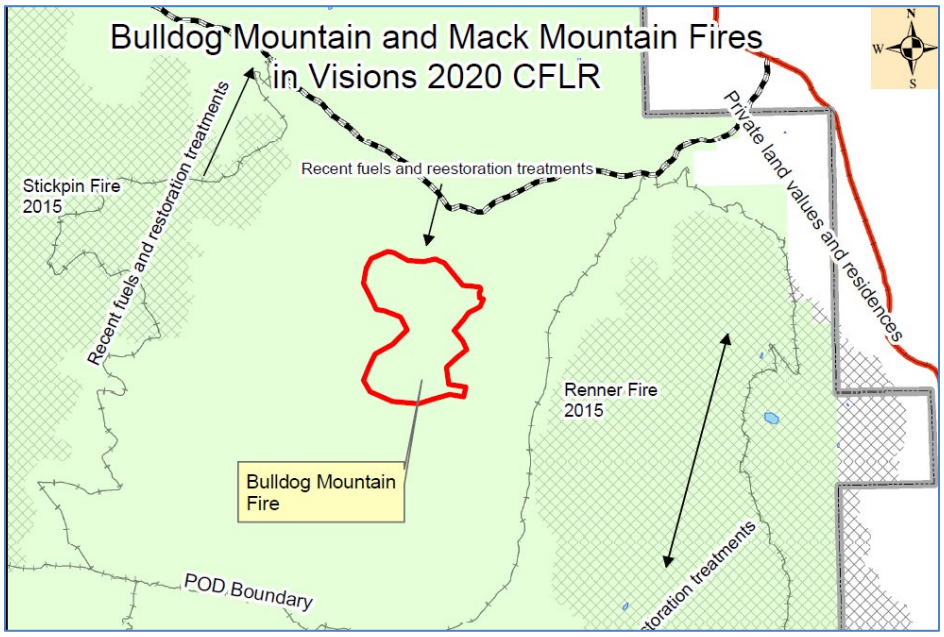


Image 1: An early Bulldog Mountain Fire perimeter relative to values, fire scars, PODs and fuel treatments. A full map view of both fires is located at the end of this portion of the CFLR report.

Fire managers had no reservations about taking an indirect strategy due to poor access and high hazard risks to firefighters, which are circumstances not to be compromised. What was interesting, was to see how potential indirect fire line locations for primary and secondary contingencies aligned on a broader extent with the other considerations listed.

The consideration of fuel treatments that have occurred over the past several years in the CFLR highlighted opportunities where indirect line locations presented a higher chance of success for the fires' containment. Specifically, off portions of the Bulldog Mountain Fire's perimeter, where various fuels commercial harvest thinning, piling and prescribed fire treatments have occurred the past several years. The following image is an example of prescribed pile burn that was the final treatment of a unit that had been commercially harvested, ladder fuel thinned and piled.

Image 2: Prescribed pile burning in the Deer Jasper project (fall, 2020.) Unit located to the west of the Bulldog Mountain Fire.

Not all the indirect line locations for the fires were able to utilize fuel treatments. However, heavy equipment was used to improve roads that served as contingency lines, thus linking together completed fuel treatments in several locations.

The consideration of 2015 fire scars also served as opportunities to stop or slow fire spread as part of the indirect fire strategy. The IMT opened up old contingency fire lines in the Renner Fire, to the east of Bulldog Mountain, that served as a secondary containment lines should the fire have spread towards private land values. Otherwise, the fire scars were 'untouched' and simply stood as opportunities to contain the Bulldog and Mack Mountain Fires if needed.

The final consideration that local fire managers used to verify that an indirect fire strategy was most prudent was the location of POD boundaries relative to both fires. PODs were initially drafted on the Colville NF in 2019, and they are delineations intended to aid fire managers in determining if alternative strategies can be employed for fire response. PODs also may be useful for IMTs to determine fire line locations in large fire situations.

PODs on the Colville were determined in part, based on forest road locations, fuel treatments, proximity of values to protect and other geographic features that may potentially lend to advantageous fire line locations. For the Forest, PODs are still in their infancy stages in that fire management and line officers have had minimal opportunity to assess their relevance for large fire response and strategy determination. In fact, this past fire season, with Bulldog and Mack Mountain Fires, was the first opportunity to assess PODs with fire strategy, as indirect line locations were placed along

POD boundaries. Although this was somewhat circumstantial, it is viewed as a success for PODs aiding the indirect strategy employed and the placement of fire lines for both fires.

One key benefit in utilizing fuel treatments, fire scars and PODs to implement indirect fire line was lower suppression costs (relative to typical large fire management.) The IMTs delegated to manage Bulldog and Mack over the course of 3-4 weeks were able to be successful using less suppression resources than a typical large fire, and ultimately contain costs. In short, less activity was needed to prep fire lines and thus less activity to repair fire lines. A cost comparison in Table 1 between the Horns Mountain Fire of 2018 (located in the CFLR) and Bulldog and Mack Fires highlights the cost savings. Though circumstances were slightly different, there are key similarities to note:

- In 2018, numerous fires across the west similarly presented scarce resources and IMTs.
- The Horns Mountain Fire was located solely on Colville National Forest system lands in the CFLR, similar as both Bulldog and Mack Mountain Fires.
- Horns Mountain Fire had limited values to protect (though it's proximity to the Canadian border was a more unique circumstance than this past summer's fires.)

Cost savings for management of the 2021 fires is significant, and this was intentional by local fire management and the Agency Administrator for the 2021 fires. The same individuals had similar roles for the Horns Mountain Fire, and they had engaged in numerous discussions after Horns on how they could improve management and delegation of future fires to reduce costs.

Table 1: Cost comparison between Horns Mountain Fire in 2018 and 2021 large fires in CFLR

Fire	Acres	Estimated Cost
Horns Mountain	5,889	$12,000,000
Bulldog Mountain	7,200	$5,000,000
Mack Mountain	1,433	$525,000

Expenditures

Category	**$**
FY21 Wildfire Preparedness[1]	$427,371
FY21 Wildfire Suppression[2]	$5,525,000
The cost of managing fires for resource benefit if appropriate (i.e. full suppression versus managing)	See description
FY21 Hazardous Fuels Treatment Costs (CFLN)	$1,490,129
FY21 Hazardous Fuels Treatment Costs (other BLIs)	$1,264,518

[1] Include base salaries, training, and resource costs borne by the unit(s) that sponsors the CFLRP project. If costs are directly applicable to the project landscape, describe full costs. If costs are borne at the unit level(s), describe what proportions of the costs apply to the project landscape. This may be as simple as Total Costs X (Landscape Acres/Unit Acres).

[2] Include emergency fire suppression and BAER within the project landscape. Describe acres of fires contained and not contained by initial attack. Describe acres of resource benefits achieved by unplanned ignitions within the landscape. Where existing fuel treatments within the landscape are tested by wildfire, summary and reference the fuel treatment effectiveness report.

Image 3: View of Bulldog Mountain Fire looking to the southwest and indicates (at a glance) a mixed severity burn.

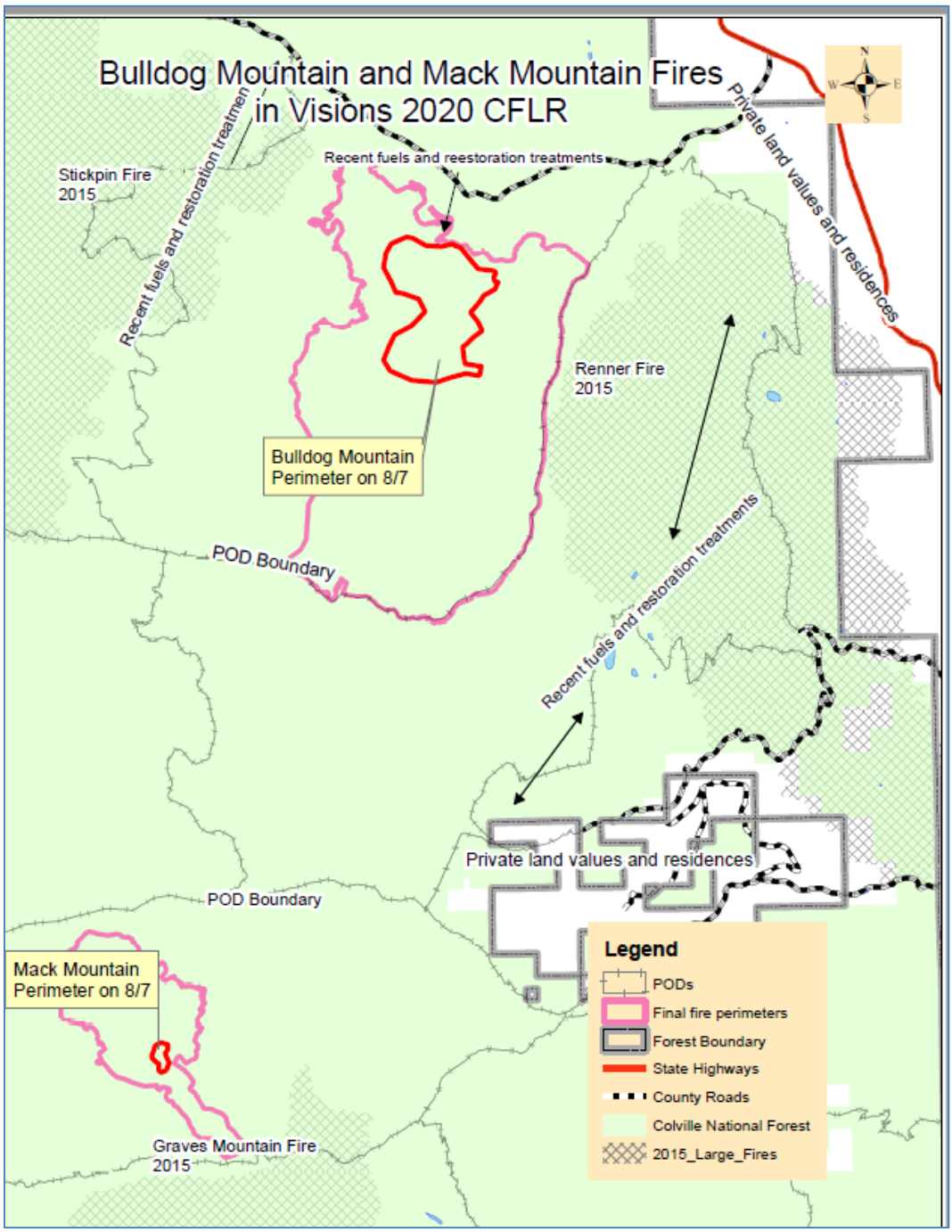
The second, key benefit to the strategy employed for the two fires is that fire effects on more than half the acres are anticipated (once final analysis is complete) to be a resource benefit and meet Forest Plan objectives. Image 3 provides a brief snapshot indicating less severe fire effects across the Bulldog Mountain Fire.

Although resource benefit was not a fire suppression objective per se, it was expected that fire across the landscape would be more beneficial than not, based on current forest conditions and past fires in the CFLR. The following table lists the 2015 fires (in the vicinity of Bulldog and Mack Mountain Fires) and the percentage of those fires' acres that benefited forest health conditions.

Fire	Total Acres	% of acres that were resource benefit
Stickpin	54,499	47%
Renner	13,106	63%
Graves Mountain	8,585	88%

In summation, the indirect strategy employed for both the Bulldog Mountain and Mack Mountain Fires was successful in meeting fire suppression objectives, reducing overall suppression costs and secondarily, benefitting forest health conditions. Lessons learned from past large fire management in the CFLR, understanding fire effects of previous fires, taking advantage of fuel treatments / fire scars, and verifying alignment with PODs collectively aided to the success.

The following page has a map of the two fires and their proximity to the considerations listed in this portion of the CFLR report. Note that the map shows the fire perimeters as of 8/7/2021 and not the final fire sizes.


Bulldog Mountain and Mack Mountain Fires in Visions 2020 CFLR
Stickpin Fire 2015
Recent fuels and restoration treatmen
Recent fuels and reestoration treatments
Private land values and residences
Renner Fire 2015
Bulldog Mountain Perimeter on 8/7
POD Boundary
Recent fuels and restoration treatments
Private land values and residences
POD Boundary
Mack Mountain Perimeter on 8/7
Graves Mountain Fire 2015
Legend
PODs
Final fire perimeters
Forest Boundary
State Highways
County Roads
Colville National Forest
2015_Large_Fires

3. TREAT

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 (TREAT) inputs and assumptions available here.[3]

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 Avista's Kettle Falls Generating Station. The percentages are the similar for both CFLN and non-CFLN projects across the Forest.

Looking at your CFLRP project's TREAT Data Entry "Full Project Details" Tab, what percent of funding was used for contracts within the local impact area? (**see cell D13**)[4] If you have data on what percent of funding was used for **agreements** within the local impact area, please note.

Contract Funding Distributions ("Full Project Details" Tab):

Description	Project Percent
Equipment intensive work	58
Labor-intensive work	6
Material-intensive work	10
Technical services	0
Professional services	26
Contracted Monitoring	0
TOTALS:	**100%**

Please provide a brief description of the local businesses that benefited from CFLRP related contracts and agreements, if known. Consider characteristics such as tribally-owned firms, veteran-owned firms, women-owned firms, minority-owned firms, and business size.[5]

The past 2-3 years, the sustained pace and scale of forestry work in our Forest's CFLR area as well as other project areas, has provided economic benefit to our communities in a few ways:

- Contractors from out of area have come to rely on our available, fuels work as an opportunity to continue investing in their companies. In other words, our work and contracts have provided stability.
- In turn, these contractors are renting and purchasing equipment from our local areas and boosting our local service sector by bringing an influx of workers to the area for 6-8 months.
- Local contractors, specifically in support of Rx Fire activities, have been able to increase investments in local employment and overall, have experienced positive growth in their business.

[3] *For CFLRP projects under the CFLRP Common Monitoring Strategy this and the responses below address the core CFLRP common monitoring strategy questions, "*How have CFLRP activities supported local jobs and labor income?" and "How do sales, contracts, and agreements associated with the CFLRP affect local communities?

[4] If you would prefer to use other data collected locally, you may include that here. Do not include dollars that were contracted to firms outside of the local area.

[5] This information is publicly available through usaspending.gov, there are other firm characteristics that may be more relevant for your CFLRP project or important for tracking over time.

FY 2021 Modelled Jobs Supported/Maintained (CFLN and matching funding):

FY 2021 Jobs Supported/Maintained	Jobs (Full and Part-Time) (Direct)	Jobs (Full and Part-Time) (Total)	Labor Income (Direct)	Labor Income (Total)
Timber harvesting component	68	118	5,904,179	8,189,654
Forest and watershed restoration component	20	43	1,120,555	2,084,687
Mill processing component	108	280	7,209,713	15,406,463
Implementation and monitoring	2	8	1,384,413	1,659,728
Other Project Activities	0	0	0	0
TOTALS:	**198**	**449**	**15,618,859**	**27,340,531**

4. Community Benefits

Briefly describe community benefits that align with the CFLRP proposal and strategies socioeconomic goals. **How has CFLR and related activities benefitted your community(ies) from a social and/or economic standpoint?** Please link to monitoring reports or other relevant information if available.

Indicator	Brief Description of Impacts, Successes, and Challenges	Links to reports or other published materials (if available)
Community wildfire protection	The CFLN has continued support necessary protective work for critical infrastructure in the project area, mostly notably around SR21 and the Kettle Falls/Republic power line corridor, which is the primary conduit of electricity into northern Ferry County. CFLN funded fuel reduction, forest health, and road improvement work has been used to improve protection of the Deadman community during the 2015 Renner fire, the 2018 Boyds fire, and the 2021 Bulldog Mountain and Mack Mountain fires.	
Contributions to the local recreation/tourism economy	Funding of recreation projects has allowed the forest to directly hire two summer temporary positions, support two-weeks of a ten-person youth crew and hire local trail contractors. Trail and recreation site improvement projects puts funds directly into the local community through employee, contractor, and youth crew temporary housing, food, supplies, and material purchases and supports the local recreation/tourism economy by providing tourists with high-quality recreation opportunities and facilities.	
Volunteer/outreach participation	This project has been successful in bringing youth, veterans, and individual volunteers to the CNF to work on a variety of recreation resource improvement projects, both this year and in year's past. Several of these young workers and volunteers have indicated the work they completed on the CNF opened their eyes to a whole range of employment opportunities they had never considered.	
Job training opportunities	By focusing on trail and recreation related improvements, CFLN funding has allowed our partners to focus their efforts on local resource related job training and recruitment opportunities, and	

Indicator	Brief Description of Impacts, Successes, and Challenges	Links to reports or other published materials (if available)
	volunteer outreach, which has improved community support of this initiative.	
# Cross-institutional agreements/policies	CFLN funded monitoring efforts conducted by research staff and scientists at the University of Washington operating under a multi-year agreement.	https://www.fs.usda.gov/detail/colville/workingtogether/?cid=fseprd507946
Relationship building/collaborative work	CFLN funded recreation work has allowed the forest to further build relationships with partners such as Northwest Youth Corps, Pacific Northwest Trail Association, Washington Trails Association, Evergreen Mountain Bike Alliance, Tri-County Motorized Recreation Association, and Backcountry Horseman of Washington. Washington State DNR Federal Lands has worked closely with the CNF to implement several projects within the CFLRP project area and is currently working with the CNF to increase the pace and scale of non-commercial forest health and fuel treatments. Our relationship with WA State DNR Forest Health and Resiliency is being built as we work with them on landscape evaluations and monitoring within the CFLRP project area.	

5. Multiparty Monitoring Process

Based on your project monitoring plan, **describe the multiparty monitoring process.** *Consider:*

- *What parties (who) are involved in monitoring, and how?*
  A team of research scientists and technicians at the University of Washington utilized LiDAR and photogrammetrically-derived digital surface models (DSM) and top of surface point data derived from the Hexagon Imagery Program (HxIP) (hereafter, 'phodar') and processed and provided by the Washington state Department of Natural Resources to integrate ground-based monitoring and landscape-scale monitoring. UW worked with Colville National Forests managers and staff and CFLRP stakeholders to integrate the results into their assessments and planning.
  The UW lab was contracted by DNR to assess the possible utility for digital aerial photogrammetry to serve as a cost-effective and accurate source of remotely sensed data to track changes to forest structure over space and time, both at the fine (treatment) scale and broader scales, including over large fire perimeters. The goal is to also see if treatments have shifted the pattern, structure, and composition of vegetation at the stand, watershed, and CFLRP scale towards desired targets, as well as to see if treatments are resulting in patterns of tree clumps, openings, and individual trees to those within ranges of pre fire suppression reference stands. This goal is directly tiered to monitoring questions outlined in the CFLR monitoring plan.

- *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 major positive and negative ecological, social and economic shifts observed through monitoring? Any modifications of subsequent treatment prescriptions and methods in response to these shifts?*

Monitoring efforts included analysis of CFLRP treatment areas using existing lidar (where it post-dates treatments) and 2017 phodar (all treatments) data to determine how well treatments met management prescription to meet prescription goals for basal area, canopy cover, tree clumping patterns, and opening patterns; results will be correlated with results of stem maps from field plots. For tree clumping and opening patterns, the accuracy of the lidar and phodar measurements will be assessed against the previously-established lidar individual tree, tree clump, and opening (LICO) stem mapped plots as well the stem maps to be produced for the Active Adaptive management plots to be done in FY19 (see below).

This work addresses the following CFLRP monitoring goal:

> 4a: Are treatments resulting in patterns of tree clumps, openings, and individual trees that are within ranges of pre-fire suppression reference stands?

Landscape-scale Treatment Effects Monitoring

Monitoring efforts also included the use the 2015 and 2017 phodar data to calculate inventory metrics, structure classes, and tree clumping and opening patterns across the entire CFLRP project area. These data sets will be compared with results from lidar and between phodar data sets to determine areas of likely change and categorize degree of change. This work will evaluate how well the cumulative effects of the treatments have moved the landscape toward the targets established by the CFLRP. This work addresses the following CFLRP monitoring goal:

> 2. Did we shift the pattern, structure, and composition of vegetation at the stand, watershed, and CFLRP scale towards desired targets?

Major positive and negative ecological shifts observed thus far through monitoring are preliminary and generally limited to stand-level effects: reduced forest density and structural shifts that improve forest develop toward late-old structural stages. Species composition also shifted toward disturbance and drought-tolerant species communities, spatial patterns generally improved in some respects (more openings and small clumps of trees), and tree-stressing parasites (dwaft mistletoes) were reduced. In some cases the relative preponderance of large clumps was reduced—or at least not improved as much as was desired—and so future prescriptions will be adjusted to better ensure these spatial components are retained in treated stands.

- *What are the current weaknesses or shortcomings of the monitoring process? How might the CFLRP monitoring process be improved? (Please limit answer to one page.).*

Our monitoring efforts did not present any apparent weaknesses or shortcomings other than difficulties that might normally be expected with the procurement and development of novel technologies, methods, or datasets. It's not clear what remedial actions would have been taken with the benefit of hindsight or in looking to future efforts, but expectations are that monitoring products and reports will still be delivered according to established timeframes. One improvement that will be considered for the monitoring process is that the timing of annual reports provided by our cooperators will be made more congruent with this report.

- *Please provide a link to your most up-to-date multi-party monitoring plan and any available monitoring results from FY21.*

The monitoring plan is maintained with Forest Service filing systems at: (insert link here). Colville National Forest - Working Together (usda.gov)

6. FY 2021 Agency performance measure accomplishments:

Performance Measure	Unit of measure	Total Units Accomplished	Total Treatment Cost ($) *(Contract Costs)*
Acres of forest vegetation established FOR-VEG-EST	Acres	0	
Acres of forest vegetation improved FOR-VEG-IMP	Acres	1,082	
Manage noxious weeds and invasive plants INVPLT-NXWD-FED-AC	Acre	0	
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	6.8	
Acres of lake habitat restored or enhanced HBT-ENH-LAK	Acres	0	
Miles of stream habitat restored or enhanced HBT-ENH-STRM	Miles	1	
Acres of terrestrial habitat restored or enhanced HBT-ENH-TERR	Acres	566.8	
Acres of rangeland vegetation improved RG-VEG-IMP	Acres	0	
Miles of high clearance system roads receiving maintenance RD-HC-MAIN	Miles	1	7,000
Miles of passenger car system roads receiving maintenance RD-PC-MAINT	Miles	1.1	7,000
Miles of road decommissioned RD-DECOM	Miles	2.363	
Miles of passenger car system roads improved RD-PC-IMP	Miles	3.12	23,892
Miles of high clearance system road improved RD-HC-IMP	Miles	28.526	204,449
Road Storage *While this isn't tracked in the USFS Agency database, please provide road storage miles completed if this work is in support of your CFLRP restoration strategy for tracking at the program level.*	Miles	0	
Number of stream crossings constructed or reconstructed to provide for aquatic organism passage STRM-CROS-MTG-STD	Number	1	278,483
Miles of system trail maintained to standard TL-MAINT-STD	Miles	178.246	202,865
Miles of system trail improved to standard TL-IMP-STD	Miles	0	
Miles of property line marked/maintained to standard LND-BL-MRK-MAINT	Miles	0	
Acres of forestlands treated using timber sales TMBR-SALES-TRT-AC	Acres	1970	
Volume of Timber Harvested TMBR-VOL-HVST*	CCF		
Volume of timber sold TMBR-VOL-SLD*	CCF	62,163.22	
Green tons from small diameter and low value trees removed from NFS lands and made available for bio-energy production BIO-NRG*	Green tons	8.79	
Acres of hazardous fuels treated outside the wildland/urban interface (WUI) to reduce the risk of catastrophic wildland fire FP-FUELS-NON-WUI	Acre	1,833	35,302
Acres of wildland/urban interface (WUI) high priority hazardous fuels treated to reduce the risk of catastrophic wildland fire FP-FUELS-WUI	Acres	4,545	87,533
Acres mitigated FP-FUELS-ALL-MIT-NFS	Acres	6,378	122,835
Please also include the acres of prescribed fire accomplished	Acres	4,383	

Performance Measure	Unit of measure	Total Units Accomplished	Total Treatment Cost ($) *(Contract Costs)*
(Optional) Other performance measure not listed above	*Acres*		
(Optional) Other performance measure not listed above	*Acres*		

Units accomplished should match the accomplishments recorded in the Databases of Record. For CFLRP projects under the CFLRP Common Monitoring Strategy, items marked with a * help to address the core CFLRP common monitoring strategy question, "Did CFLRP increase economic utilization of restoration byproducts?"

7. Treatment Footprint

Fiscal Year	**Footprint of Acres Treated** (without counting an acre of treatment on the land in more than one treatment category)
FY 2021	10,561
Estimated Cumulative Footprint of Acres (CFLRP start year through 2021)	122,632

8. FY 2020 Report Reflections

Describe any reasons that the FY 2021 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?

The project reflects estimates provided in the 2020 annual report. The timber volume is lower. One of our projects is undergoing litigation. Projects from that sale are not underway.

8.5 FY 2021 Additional accomplishment narrative

Trail Restoration

The forest maintained and improved drainage to reduce erosion and effects to aquatic species across the NEW Forest Vision 2020 area using local trail contractors to restore drainage structures on 178.5 miles of trail. This work was funded through $44,251 of CFLN appropriations. Due to the pandemic, partner support was limited to those organizations that had COVID-19 safety plans in-place which included the Pacific Northwest Trail Association, Washington Trails Association, Evergreen Mountain Bike Alliance, Ferry County Chapter Backcountry Horseman and Tri-County Motorized Recreation Association. Combined, these partners improved approximately 25 miles of trail to standard (water drain reconstruction and new construction, brushing, tread reconstruction to improve cross drainage, turnpike construction, logout, and retaining wall construction) to reduce existing and potential erosion and approximately 150 miles of ditch, culvert and water bar cleanout, logout, and garbage collection along the Forest's OHV/Jeep trails and horse trails. Partners contributed approximately $40,400 in labor, stock, and equipment to improve drainage and maintain trails within the NEW Forest Vision 2020 project area in 2021.



Pacific Northwest Trail Association Performance Trail Crew constructs a turnpike and puncheon bridge over a perennial seep and seasonal pond on East Deer Creek TR 6100-450.

The forest replaced two large trail bridge structures over Sherman Creek and Deadman Creek. In both cases, the bridge abutments were located within the stream channel, restricting high flows, and the bridge stringers were too low and too short to accommodate a 100-year flood event. The forest used $130,000 of Great American Outdoors Act funding and $131,155 of CFLN appropriations to complete this project. The forest was able to save tens of thousands of dollars by repurposing and moving the existing Sherman Creek bridge to the Deadman Creek site. A new steel stringer bridge was installed over Sherman Creek. The new bridges will now accommodate 100-year flood events and no longer restrict stream movement during seasonal high-water events.

Hoodoo Canyon trail bridge over Deadman Creek that was replaced to move abutments out of stream channel and elevate the stringers to accommodate a 100-year flood event.

Original Canyon Creek trail bridge over Sherman Creek during high water in May 2017. Abutments were located within the river channel and high water would hit the north end stringers and undermine the north end abutment.

Contractor uses large construction forklifts to align and assemble the new multi-piece trail bridge over Sherman Creek.

New Canyon Creek trail bridge over Sherman Creek in November 2021. The new bridge was extended 35 feet to allow the abutments to be located 10-20 feet outside of the channel and the stringers were elevated 5-6 feet to accommodate 100-year flood events.

The forest also completed the Hoodoo Canyon Trail Restoration project during the early summer of 2021. This project was delayed in 2020 because of supply chain issues caused by COVID-19. Work completed in 2021 included a new 50-foot-long trail bridge over Trout Creek (to accommodate 100-year flood events) and a 50-foot-long boardwalk to protect the riparian area leading into and out of the stream crossing.

New ramp, boardwalk, and bridge over Trout Creek on the Hoodoo Canyon Trail.

Riparian Protection

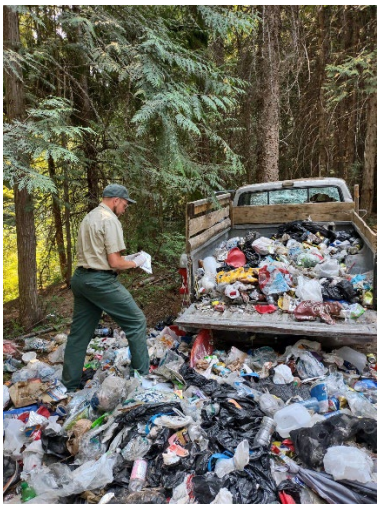
An eleven-member (10 youth and one crew leader) Northwest Youth Corps (NYC) crew spent a week, with support from Forest Service Recreation crew members, reconstructing cattle exclosure fencing around Swan, Ferry, and Long Lakes. This fence line prevents dozens of permitted cattle from accessing and damaging the lakeshore riparian areas and was heavily impacted by dead trees that continue to fall because of mortality caused by the 2015 North Star Fire. Crews completed approximately 4 miles of fence reconstruction over a period of 3-4 weeks (FS recreation crews finished the project after NYC completed their work) that included: H-brace repair, logout, brushout, t-post replacement, and extensive wire splicing, replacement, stretching and attachment to H braces and t-posts. NYC contributed approximately $9,400 in matching funds, the Forest contributed approximately $9,100 in recreation funds, and approximately $8,500 in CFLN appropriations were used to complete the project.

The same NYC crew was scheduled to complete approximately 120 feet of turnpike on the Swan Lake Trail. However, the crew was pulled from the field when air quality reached the very unhealthy level because of local and regional wildfire smoke. This work has been rescheduled for the summer of 2022.

The forest also repaired a heavily used fishing and boat dock at Pierre Lake Campground that was originally installed to prevent lakeshore erosion and vegetation loss caused by anglers and recreationists tying boats off to the shoreline. In the spring of 2021, the metal retaining pilings were stolen for the second time and the dock was no longer safe for use and needed to be removed from the lake to prevent severe damage. The forest used $7,500 of CFLN appropriations to replace the pilings with an underwater chain and anchor securing system to prevent future theft and damage which would allow the dock to continue to protect the lakeshore vegetation and prevent future erosion.

Knight Boat Dock personnel prepare to secure the Pierre Lake boat dock with 700-pound concrete anchors and heavy-duty chain to prevent future theft and damage to the dock system.

The Forest funded a two-person recreation crew to manage dispersed recreation within the NEW Forest Vision 20/20 area that focused exclusively on reducing the effects of dispersed and motorized recreation on the ecosystem with an emphasis on riparian areas. The crew removed 4 user created toilets, buried exposed human waste in numerous dispersed campsites, and collected 78 (44-gallon) bags of garbage, approximately 85% of which came from riparian areas. The crew removed 9 tires and a variety of miscellaneous junk from the forest. The crew also disassembled three large rock and log debris recreation dams and 33 user-constructed lean-tos/shelters and other structures made of logs, metal, rope, nails, wire, dimensional lumber, etc. from the forest. The crew contacted 82 groups, to educate users on proper food storage, sewage and sanitation disposal, and OHV opportunities to reduce the likelihood of illegal use damaging riparian areas or sensitive soils. The crew pulled 9 (44-gallon) bags of mullein and 22 (44-gallon) bags of knapweed and a variety of other noxious weeds from trailheads to reduce the spread of weeds into the backcountry. Seventeen restrooms, half of which were located and constructed to eliminate human waste from recreation use from entering nearby streams or lakes were maintained weekly over the summer. The crew also assisted with the reconstruction of the cattle exclosure fence around Long, Ferry, and Long Lakes and removed 190 down trees from roadways to prevent further soil damage caused by vehicles travelling through the forest to get around the trees.



Left Photo: Recreation Crew members start clean-up of an abandoned truck full of garbage along S. Fk. Sherman Creek.
Center Photo: Success – recreation crew shows pride in their accomplishment.

Right Photo: Tires and miscellaneous garbage pulled from the forest.

(*OPTIONAL*) FOR INTERNAL USE: The following responses are directed towards feedback on *internal* bottlenecks or issues that may impact your project. Please use this space to raise awareness on key internal issues, or opportunities to improve processes moving forward. Responses will be included in an internal document. What are the limiting factors to success or more success of the CFLR? How can the National Forest and its collaborators operate in a more integrated and synergized way?

Our Forest is at capacity, given the current staffing and vehicle caps imposed on the Forest due to budget modernization. We have increased the pace and scale of forest restoration through use of Shared Stewardship and CFLRP, and are at a level now, where we are trying to maintain the scale of work. CFLRP is an important tool for us in reaching our current treatment level of 5% of the Forest per year.

9. Planned FY 2022 Accomplishments

Performance Measure Code	**Unit of measure**	**Planned Accomplishment for 2022** (National Forest System)	***Planned Accomplishment on non-NFS lands within the CFLRP landscape*[6]**
Acres of forest vegetation established FOR-VEG-EST	Acres	2,480	
Manage noxious weeds and invasive plants INVPLT-NXWD-FED-AC	Acre	400	
Miles of stream habitat restored or enhanced HBT-ENH-STRM	Miles	2	
Acres of terrestrial habitat restored or enhanced HBT-ENH-TERR	Acres	2,000	
Miles of road decommissioned RD-DECOM	Miles	3	
Miles of passenger car system roads improved RD-PC-IMP	Miles	5	
Miles of high clearance system road improved RD-HC-IMP	Miles	45	
Volume of timber sold TMBR-VOL-SLD	CCF	0	
Green tons from small diameter and low value trees removed from NFS lands and made available for bio-energy production BIO-NRG	Green tons	8	
Acres of hazardous fuels treated outside the wildland/urban interface (WUI) to reduce the risk of catastrophic wildland fire FP-FUELS-NON-WUI	Acre	6,000	
Acres of wildland/urban interface (WUI) high priority hazardous fuels treated to reduce the risk of catastrophic wildland fire FP-FUELS-WUI	Acres	9,000	

Please include all relevant planned accomplishments, assuming that funding specified in the CFLRP project proposal for FY 2021 is available.

[6] If relevant for your project area, please provide estimates for planned work on non-NFS lands within the CFLRP areas for work that generally corresponds with the Agency performance measure to the left and supports the CFLRP landscape strategy

10. Planned Accomplishment Narrative

Planned accomplishment narrative and justification if planned FY 2022 accomplishments and/or funding differs from CFLRP project work plan (for CFLRP projects with **known** ongoing funding in FY22):

The projections from the extension proposal was used for the planned accomplishments. The timber sale scheduled for implementation next year is under a lawsuit and may not occur.

11. Collaborative List

Washington State DNR Federal Lands Program
Washington State DNR Forest Health and Resiliency Division
Confederated Tribes of the Colville Indian Reservation
Northeast Washington Forest Coalition
University of Washington
Quad County Forest Group
Ferry County
US Department of Fish and Wildlife
Orient Water Board

The Northeast Washington Forest Coalition has an updated website with a list of board members:
https://www.newforestcoalition.com/our-vision

12. Reflections on Lessons Learned

A lot can happen in ten years. When we started the CFLRP, we knew we would get a lot done. I don't think we realized how it would help our forest get better at the process of restoring landscapes. We radically changed the way we plan our projects. We used to live by a five year plan with only rumors about where we would go next. Now we have a 20 year plan that identifies all the planning areas on the Forest and when we will be working in them. We went from fuel reduction projects to whole watershed restoration. We would do separate planning for different types of projects. Now we focus restoration to gain efficiencies. With our 2019 Forest Plan, we incorporate Watershed Condition Framework and historical range of variability to show how we are improving watersheds and landscapes with our treatments. In the next 20 years across our CFLRPs and the Forest, we will have replaced most of the fish barriers, put our closed roads in a hydrologically stabilized state, and moved closer to our desired condition for vegetation.

We were able to go big on our fuel treatments with CFLRP funding and match. This led to an increased knowledge base in our staff and more effective and innovative treatments on the ground. However, this took time to develop and we are going to have our CFLRP fuels team work with the rest of our Forest fuels team.

Recreation pursuits have a substantial impact on the landscape, and most of those occur in riparian areas. The greatest recreation lesson learned is that the forest did not think big enough regarding the potential benefits to soil, plants, riparian areas, erosion control, and properly functioning forest ecosystems within our developed and dispersed recreation sites and along our trail systems when we planned and estimated our accomplishments.

We also learned that partner organizations and volunteers are excited about and want to engage with the forest on recreation restoration projects. Many of these individuals recognize the damage that recreation has caused over their

lifetimes and desire to be part of the solution so that high quality recreation settings, opportunities, and facilities exist for current and future generations.

The authorities that have changed in the last 10 years have really added to our success in terms of increasing the pace and scale is the reliance on external partners. We have a strong Good Neighbor Authority program here, successful Tribal Forest Protection Act projects with Tribes, and have led out on the A to Z model, with two A to Z projects.

Signatures:

Recommended by (Project Coordinator(s)):_____

Approved by (Forest Supervisor(s)): _____

Draft reviewed by (collaborative chair or representative): _____