CFLR Project (Name/Number): Kootenai Valley Resource Initiative – CFLR011

National Forest(s): Idaho Panhandle National Forests

1. Match and Leveraged Funds:

a. FY18 Matching Funds Documentation

Fund Source – (CFLN/CFLR Funds Expended)	Total Funds Expended in Fiscal Year 2018
CFLN16	$96,120
CFLN18	$1,299,423

This amount should match the amount of CFLR/CFLN dollars obligated in the FMMI CFLRP 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 2018
NFHF18	$162,056
WFHF17	$199,202

This value (aka carryover funds or WO unobligated funds) should reflect the amount expended of the allocated funds as indicated in the 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 2018
BDBD	$93,798
CMRD	$101,545
CWF2	$15,000[1]
CWK2	$148,851
CWKV	$84,359

Fund Source – (Funds contributed through agreements)	Total Funds Expended in Fiscal Year 2018
NFXF	$25,000

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 FMMI CFLRP 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 2018
Trail Maintenance & Improvement and Monitoring:	$291,600

[1] The $15,000 amount in CWF2 doesn't match the $697,934 shown as matching funds obligated in the FMMI CFLRP expenditure report. The $697,934 was the amount of CWF2 obligated to the entire Forest and should never have been shown as a match for CFLRP.

Fund Source – (Partner In-Kind Contributions)	Total Funds Expended in Fiscal Year 2018
Camp Thunderbird, Access Outdoors, Sierra Club, Kootenai Valley Volunteers, Priest River BCH, Idaho Trails Association, Idaho Conservation League, Gardinar Family, YCC, SCA, Bridging Cultures, Montana CC, Collaborative Project Meetings: Kootenai Valley Resource Initiative (KVRI) Noxious Weed Treatment – Boundary County, ID	$22,524 $1,670

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

Service work accomplishment through goods-for services funding within a stewardship contract (for contracts awarded in FY18)	Totals
Total revised non-monetary credit limit for contracts awarded in FY18	$0.00

Revised non-monetary credit limits for contracts awarded prior to FY18 were captured in previous reports (FY16 and FY15). This should be the amount in contract's "Progress Report for Stewardship Credits, Integrated Resources Contracts or Agreements" in cell J46, the "Revised Non-Monetary Credit Limit," as of September 30. Additional information on the Progress Reports is available in CFLR Annual Report Instructions document.

b. Please fill in the table describing leveraged funds in your landscape in FY2018. Leveraged funds refer to funds or in-kind services that help the project achieve proposed objectives but do not meet match qualifications.

Description of item	Where activity/item is located or impacted area	Estimated total amount
Kootenai River Restoration work implemented by Kootenai Tribe of Idaho	Accomplishments: 1.3 miles of river improved 26.5 acres of floodplain improved/created 9 acres of pool habitat created 4,700 feet of streambank restored 4,000 plantings **17,000 willow cuttings planted**	**$4.0 Million**

(Optional) Additional narrative about leverage on the landscape if needed:

The Kootenai Tribe of Idaho has been implementing river restoration projects in the main stem of the Kootenai River to improve morphology, riparian and aquatic habitat conditions for native fish and wildlife species. The Lower Meander Project was implemented during the 2017/2018 construction season. The Lower Meander project area is located upstream of the US Highway 95/2 Bridge. This

project was implemented in two phases. Phase 1 was completed in November 2017 and Phase 2 was completed in November 2018. The 2018 restoration activities included excavation of two deep pools (20 to 30 feet deep depending on flows), enhancement of six islands, removal of debris and car bodies from the river bank, and the restoration and stabilization of river banks. These restoration actions improve habitat conditions for adult and juvenile Kootenai River white sturgeon, bull trout, burbot, and other native 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***.

FY2018 Overview

FY18 Activity Description (Agency performance measures)	**Acres**
Number of acres treated by prescribed fire	523[2]
Number of acres treated by mechanical thinning	2,125
Number of acres of natural ignitions that are allowed to burn under strategies that result in desired conditions	0
Number of acres treated to restore fire-adapted ecosystems which are maintained in desired condition	1,649
Number of acres mitigated to reduce fire risk	1,892

Please provide a narrative overview of treatments completed in FY18, including data on whether your project has expanded the pace and/or scale of treatments over time, and if so, how you've accomplished that – what were the key enabling factors?

Actual fuels treatments for 2018 included the of harvest of several timber sale units, related purchaser work or stewardship items including slashing, grapple-piling of surface fuels, as well as force account work such as slashing, piling, pile burning and activity, and natural fuels underburning. No landscape burning was completed in 2018, as our focus was fuels reduction in the WUI and burning for site-preparation to plant. Maintenance treatments also occurred and included grazing, pre-commercial thinning and white-pine pruning.

[2] The 'Number of acres treated by prescribed fire' does not include the TIMBER-BRUSH DISPOSAL (BD) prescribed fire acres, which are a critical component of our fuels reduction program. These acres are not counted because they are considered harvest created ('activity') fuels, rather than natural fuels. However, all of the fuels that end up as slash on the ground following harvest originated in the treatment unit prior to the activity. Often they are the over-abundant ladder fuels, the tall and heavy brush, dead and dying branches, or the tops of a very dense stand of timber that needs thinned to reduce movement of fire up and through the canopy. These 'activity' fuels were all some type of undesired natural fuel within the stand prior to harvest – and they were all fuels we deemed necessary to treat (as determined through our NFMA/NEPA analysis). Fuels treatment needs go beyond just treating the existing surface fuels; in our productive northern Idaho forests, treatments must include reducing the dense ladder and canopy fuels. And while harvest takes some of these fuels to the landing for removal, it leaves others behind, albeit, in a different form (for example, changing them from ladder fuels to surface fuels). Brush disposal dollars are therefore necessary to finalize the treatment. TIMBER-BRUSH DISPOSAL acres should be included towards 'acres treated with prescribed fire' so they are being summarized here: **in 2018, we treated an additional 566 acres with BD funded prescribed fire.**

- **How was this area prioritized for treatment?** What kinds of information, input, and/or analyses were used to prioritize? Please provide a summary or links to any quantitative analyses completed.

  Implementation of fuels treatments is prioritized based on several factors, including location – such as adjacency to private land, infrastructure, or municipal water supply – complexity such as number of resources needed for implementation, upcoming sale closure, timing restrictions (for example, seasonal activity restriction for grizzly bear), urgency for regeneration (i.e. do we need to accomplish site preparation because trees have been ordered?), etc. In regards to mechanical treatment and prescribed fire acres, the primary driver in prioritizing treatment operations is WUI values and private land; the vast majority of all acres treated have occurred in the WUI.

- **Please tell us whether these treatments were in "high or very high wildfire hazard area** from the "wildfire hazard potential map" (Firelab.org)

  - Were the treatments in **proximity to a highly valued resource** like a community, a WUI area, communications site, campground, etc.?
    All treatment areas were in a moderate or high hazard area according to the wildfire hazard potential map, and all but four acres completed were within the county defined wildland-urban interface and near communities-at-risk, such as Bonners Ferry, Moyie Springs, Eastport, Porthill, Copeland, and Naples. Completed treatment in the Twentymile sale area – including mechanical thinning and prescribed fire acres – were accomplished for the protection of the communication site on Black Mountain.

- **What have you learned** about the interaction between treatment prioritization, scale, and cost reduction? What didn't work? Please provide data and further context here.

Please provide visuals if available, including maps of the landscape and hazardous fuels treatments completed, before and after photos, and/or graphics from fire regime restoration analysis completed locally. You may copy and paste these below or provide a link to a website with these visuals.

Expenditures

Category	**$**
FY2018 Wildfire Preparedness[3]	$50,000
FY2018 Wildfire Suppression[4]	$ 2,977,000

[3] 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).

[4] 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.

Category	**$**
The cost of managing fires for resource benefit if appropriate (i.e. full suppression versus managing)	No fires managed for resource benefit in FY18.
FY2018 Hazardous Fuels Treatment Costs (CFLN)	No CFLN funds were used in FY18.
FY2018 Hazardous Fuels Treatment Costs (other BLIs)	BDBD: $215,211 CWKV: $21,210 NFHF: $237,250

How may the treatments that were implemented contribute to reducing fire costs? If you have seen a reduction in fire suppression costs over time, please include that here. ?

Over the previous four fire seasons, we have experienced wildfires either igniting in or burning in to previous fuels treatment units. In all cases, the rate of spread and fire intensity was noticeably reduced where the fire met these areas. Treatments which focus on reducing fuels in the surface, ladder and canopy fuels allow a safe and effective place for firefighters to engage in suppression action. Our treatments are designed such that fuels are best represented by a timber litter 'Fuel Model 8' (Anderson 1982) which results in flame lengths of less than 2 feet, well within the threshold of direct attack by firefighters on the ground. In recent examples where fire met a past treatment unit – the Bethlehem fire in 2015 and the Mount Hall fire in 2017 – treatment allowed firefighters to bring these fires under control during initial attack and while still small (0.3 acres and 1 acre, respectively).

The photo below shows the minimal fire behavior experienced when wildfire burns into a fuels treatment unit. As a testament to fuels reduction effectiveness, if this area had not been treated, extended attack would have been likely, potentially driving suppression costs into the hundreds of thousands of dollars.

Figure 1: Photo depicting the burned and unburned areas and the 'severity', or lack thereof, of the Mount Hall fire. Notice the minimal surface fuels (mostly just live grasses), no ladder fuels, and spaced tree crowns. The intensity of the fire, following a treatment a few years prior (Borderline Stew #125), was so low that a small tree within the perimeter survived (see foreground, middle of photo).

Have there been any assessments or reports conducted within your CFLRP landscape that provide information on cost reduction, cost avoidance, and/or other cost related data as it relates to fuels treatment and fires? If so, please summarize or provide links here:

No specific assessments or reports have been conducted that relate to this relationship. However, as we implement treatments within timber sale units we regularly access and adjust to the best way to handle the residual stand and the residual fuels (slash). This often means we leave lesser concentrations of fuels adjacent to private ownerships and may reduce overall residual fuels to a level that doesn't require a subsequent prescribed burn. This type of assessment often leads to more efficient implementation with a lower net cost.

When a wildfire interacts with a previously treated area within the CFLR boundary:

If additional assessments have been completed since the FY2017 CFLRP annual report on fires within the CFLRP area, please note that and provide responses to the questions below.

Each unit is required to complete and submit a standard fuels treatment effectiveness monitoring (FTEM) entry in the FTEM database (see FSM 5140) when a wildfire occurs within or enters into a fuel treatment area. **For fuel treatment areas within the CFLR boundary, please copy/paste that entry here and respond to the following supplemental questions. Note that the intent of these questions is to understand progress as well as identify challenges and what didn't work as expected to promote learning and adaptation.**

- *Please describe if/how partners or community members engaged in the planning or implementation of the relevant fuels treatment.*
- *Did treatments include coordinated efforts on other federal, tribal, state, private, etc. lands within or adjacent to the CFLR landscape?*
- *What resource values were you and your partners concerned with protecting or enhancing? Did the treatments help to address these value concerns?*
- *Did the treatments do what you expected them to do? Did they have the intended effect on fire behavior or outcomes? Please include a brief description.*
- *What is your key takeaway from this event – what would you have done differently? What elements will you continue to apply in the future?*
- *What didn't work as expected, and why? What was learned?*
- *Please include the costs of the treatments listed in the fuels treatment effectiveness report: how much CFLR/CFLN was spent? How much in other BLI's were spent? If cost estimates are not available, please note and briefly explain.*

Zero wildfires occurred during FY18 in previous fuel treatment areas requiring a report to the FTEM database. In particular, no wildfires burned into previously treated CFLR areas in which there was engagement from partners or coordinated efforts from other agencies, or that were in any other way planned and implemented under CFLR (to answer the italicized questions which follow). Further, FTEM only pulls treatment areas from the FACTS database which have been treated within the previous 10 years. Fires which burn into previous fuel treatments areas having occurred greater than 10 years ago do not count as a 'fuel treatment interaction' and do not get reported in FTEM.

NOTE: We believe this to be a flaw in the FTEM system. Some fuels treatments can be effective for several years beyond 10; fuel treatment effectiveness longevity depends on many factors namely forest

type, site conditions such as productivity, and what activities occurred during the fuels treatment (such as intensity of harvest and surface fuels reduction, as well as adequacy of ladder fuels removal). For example, the 2018 Copper Mountain fire burned into 3 previous regeneration harvest units where surface fuels were also treated in the early 1990s. These almost 30-year old plantations were successful at slowing the spread of the Copper Mountain fire to the southeast. See fuels treatment effectiveness monitoring report for the Copper Mountain fire that follows.

Fuels Treatment Effectiveness Monitoring

Stands: 724030077, 0074, 0073 – Canuck Line units 13, 14, 17

Purpose: Evaluation of behavior of wildfires, including resistance to control and resulting severity to resource values, occurring within previous fuels reduction treatment areas.

Background: During the 2018 fire season, previous vegetation management projects that included fuels reduction activities, were 'tested' for treatment effectiveness against advancing wildfire. Ignition of the Copper Mountain fire occurred from a lightning strike and was discovered on August 2, 2018. Over the course of about a month, the higher elevation fire spread through backing, flanking, as well as individual tree and group tree torching runs – typical of spread through subalpine fir forest types. This fire occurred outside of the county defined wildland-urban interface. However, it was apparent upon discovery that fire spread into Canada would be probable within the first few burn periods due to the fires location near the international border. Though threats to life and property were minimal, values at risk included high-valued timber stands, especially those occurring in Canada. Because of this a suppression strategy was implemented which included minimizing fire spread into Canada, containment of the fire to a specified geographic area, and continual monitoring, both by ground resources and by air.
Acres: Final control at 465 acres

Effectiveness Monitoring:

Copper Mountain Fire

Suppression action was initiated shortly after discovery on August 2, 2018, with a type 3 IC and smoke jumpers on scene. The initial objective was to prevent fire spread into Canada, but by 8/4/18 the fire had grown to 75 acres and had hit the Canadian border. On 8/8/18 a type 3 incident management team had taken command of the fire. A combination of ground firefighters building fireline, aviation resources, and heavy equipment (mostly utilized to open roads for access) were utilized to try to confine the fire away from timber assets and where growth and spread would be limited. Canadian resources – BC Fire Service – helped to confine portions of the fire where most likely to impact timber assets.
The fire hit the old Canuck Line plantations, in the U.S., on or around August 20th and at that time was approximately 200 acres in size and well established in Canada. Through each successive burn period it was observed that fire growth and spread was occurring more rapidly in the mature untreated timber, and only spreading by creeping surface fire inside the adjacent plantations (see photo on page 2). On the Canadian side, the fire had also grown into an older clearcut on the western edge and fire behavior in that area came to a near stop. By the last days of August, total fire size had reached 465 acres, 130 acres of which were in Canada. The fire area received some moisture around the first few days of September and with shorter days and

better humidity recovery at night, subsequent fire behavior and growth was minimal in all fuel types after that.

Fire Behavior associated Canuck Line Harvest Units 13, 14 and 17

Canuck Line units 13, 14 and 17 (see map on last page) were harvested as clearcuts in 1988, with slashing of damaged residuals and other unwanted understory in 1990 with dozer piling and pile burning following in 1992. These activities reduced slash from the harvest, as well as pre-existing natural fuels, and prepared the site for artificial regeneration. These units were densely planted (530-670 trees/acre) with western larch and Douglas-fir. The original prescription had a precommercial thin (PCT) planned for this year, but that activity had not occurred, likely due to these units occurring in lynx habitat (above 4500' elevation).

The IC of the Copper Mountain Fire noted minimal woody fuels remaining in these units from the activities associated with the Canuck Line timber sale from nearly 30 years ago. It's assumed coarse woody debris retention was not an objective in the early 90s, thus dozer piling would have been extremely efficient at removing nearly all down woody fuels – fine and heavy and both naturally occurring and activity related. And since PCT has not yet occurred, surface fuels are best categorized as a timber litter fuel model 8, where expected flame lengths would be expected to be low (<2 feet) – this is the fuel model we aim to achieve through fuels reduction activities in forested stands.

Even though the trees are dense and ladder fuels from low-growing crowns are present, the lack of intense surface fire successfully kept fire from moving into and through the crowns through torching. What was observed was a slow-moving surface fire that eventually died in the plantations.

Figure 2 Mature, untreated timber stand on left where fire burned through all fuels. Canuck Line plantation on right which acted as a barrier to fire growth – minimal fire spread and intensity observed.

When a wildfire occurs within the CFLR landscape on an area <u>planned</u> for treatment but not yet treated:

- Please include:
  - *Acres impacted and severity of impact*
  - *Brief description of the planned treatment for the area*
  - *Summary of next steps – will the project implement treatments elsewhere? Will they complete an assessment?*
  - *Description of collaborative involvement in determining next steps.*

During the FY18 fire season, no wildfires occurred within an area planned for treatment but not yet treated.

Please include acres of fires contained and not contained by initial attack and acres of resource benefits achieved by unplanned ignitions within the landscape, and costs.

- Include expenses in wildfire preparedness and suppression, where relevant
- Include summary of BAER requests and authorized levels within the project landscape, where relevant

There were 14 wildfires within the CFLR landscape during FY18 and all but three of these were contained during initial attack. The 11 fires contained during initial attack were all less than ½ acre, for a total of 1.7 acres of wildfires contained during initial attack.

Three fires – the Slide Creek, Smith Creek, and Copper Mountain fires – were not contained during initial attack:

- **The Slide Creek fire** was detected on July 30th, and was controlled on August 17th.
  Final size = 30 acres
  Final cost = $~275,000
- **The Smith Creek fire** was detected on July 28th and was contained and controlled on October 2nd.
  Final size = 1,115 acres
  Final cost = $300,500
- **The Copper Mountain** fire was detected on August 2nd and was contained and controlled on October 3rd.
  Final Size = 473 acres
  Final cost = $1,961,200

Total acres of 3 wildfires – Slide Ck., Smith Ck., and Copper Mtn. – which escaped initial attack: 1,588 acres

Total suppression costs for the Slide, Smith and Copper fires: $2,536,700
Total suppression cost/acre for Slide, Smith and Copper fires: $1,597

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.

Some basic background information:

- All biological surveys, marking, and layout are done with force account crews.
- Prescribed burning (both activity fuel and natural fuels) is accomplished with force account crews.
- Planting and thinning is done primarily via contract, but the contractors are all from out of area.

FY 2018 Jobs Supported/Maintained (FY18 CFLR/CFLN/ WO carryover funding):

FY 2018 Jobs Supported/Maintained	Jobs (Full and Part-Time) (Direct)	Jobs (Full and Part-Time) (Total)	Labor Income (Direct)	Labor Income (Total)
Timber harvesting component	25	38	$1,260,708	$1,550,681
Forest and watershed restoration component	5	6	$52,654	$74,228
Mill processing component	34	89	$1,956,409	$3,621,507
Implementation and monitoring	16	21	$880,965	$1,056,407
Other Project Activities	0	0	$3,433	$5,740
TOTALS:	**80**	**154**	**$4,154,169**	**$6,308,563**

FY 2018 Jobs Supported/Maintained (FY18 CFLR/CFLN/ WO carryover and matching funding):

FY 2018 Jobs Supported/Maintained	Jobs (Full and Part-Time) (Direct)	Jobs (Full and Part-Time) (Total)	Labor Income (Direct)	Labor Income (Total)
Timber harvesting component	41	63	$2,101,139	$2,584,418
Forest and watershed restoration component	16	19	$163,496	$241,988
Mill processing component	57	148	$3,260,618	$6,035,729
Implementation and monitoring	19	26	$1,150,691	$1,379,848
Other Project Activities	1	1	$5,722	$9,566
TOTALS:	**134**	**257**	**$6,681,666**	**$10,251,549**

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).

Indicator	Brief Description of Impacts, Successes, and Challenges	Links to reports or other published materials (if available)
Relationship building/collaborative work	CFLRP has provided the opportunity for increased amounts of work to be planned and accomplished within Boundary County. Public participation has increased throughout the life of the project and has resulted in stronger projects that can be supported by the public. The public feels comfortable sharing their ideas with the IDT during project development and has been a valuable source of local insight. This participation has led to improved trails, trailheads, snowmobile parking	

Indicator	Brief Description of Impacts, Successes, and Challenges	Links to reports or other published materials (if available)
	areas, transportation planning, and vegetation management. A recent example was the work with a local sportsman group that is working with the Forest Service to do monitoring along a stored road system. The low risk drainage structures along this stored road were left in place to allow foot and horse traffic along a popular route. The sportsman group has been monitoring these drainage structures and will report any problems they see in order for the Forest Service to mitigate any issues.	
% Locally retained contracts	Contracting for the restoration work associated with the CFLRP area is done in support of timber sales and also to accomplish restoration work such as AOPs within project areas. Typically, contracts in support of timber sales involve road maintenance, road reconstruction, timber harvest, log hauling, and slash treatment. This work is accomplished almost exclusively by local contractors hired by the purchaser of the sale and local subcontractors hired by the contractors. Local contractors and subcontractors get this work because of the relationships they've built through the years and the quality of their work. Contracts offered by the Forest Service to accomplish restoration work are available to any contractor who wishes to bid, but many of the contracts go to local contractors because of their lower mobilization costs and familiarity with local project areas allow them to bid very competitively.	
Duration of jobs	The logs coming off of timber sales within the CFLRP area help support loggers, log truck drivers, mechanics, and mill workers to name a few. A single project may result in multiple	

Indicator	Brief Description of Impacts, Successes, and Challenges	Links to reports or other published materials (if available)
	timber sales and the sales may take several years to complete. This steady flow of timber from Forest Service sales combined with timber coming from other ownerships is critical to maintaining the local timber infrastructure and supporting local timber jobs. This consistent source of timber allowed the local mill to modernize their equipment in 2012, increase efficiency, stay competitive and continue to employ local workers. The other forms of restoration activities such as road maintenance, culvert replacement, bridge replacement, and AOP replacement provide a consistent source of work for local contractors. These types of restoration contracts are typically accomplished in less than one year's time, but the contractors have invested in the types of equipment and skills necessary to accomplish this type of work and it makes them very competitive when bidding on projects both locally and in neighboring areas.	
Volunteer/outreach participation	Restoration work within the project area is heavily dependent on work accomplished by volunteers and partners. These volunteers and partners are critical to restoring the local trail systems and high mountain lakes. Trails and lake shores are a regular source of sediment to local waterways unless they are regularly maintained, reconstructed, rerouted, and/or stabilized. This work is not possible without the assistance of volunteers and partners. In 2017, volunteers from across the country joined members of local user groups, conservation groups, and Forest Service employees to restore approximately 343 miles of trail as well as improving plant communities	

Indicator	Brief Description of Impacts, Successes, and Challenges	Links to reports or other published materials (if available)
	along lakeshores. These volunteers and partners accounted for 10,367 hours of combined restoration work across the project area. 2017 also saw a new volunteer step up to support critical monitoring work on the range allotments within the project area. This individual had a long career in conservation and brought his expertise to the woods to assist the Forest Range Specialist. This range monitoring is vital to supporting a proactive range program.	

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 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?
- **What are the current weaknesses or shortcomings of the monitoring process?** (Please limit answer to one page. Include a link to your monitoring plan if it is available).
- **Please provide a link to your most up-to-date multi-party monitoring plan and any available monitoring results from FY18.**

National Indicators

Of the five national indicators (Ecological, Fire Costs, Jobs/Economics, Leveraged Funds, and Collaboration) developed by the Forest Service and partners, two were integrated into the monitoring plan (Jobs/Economics and Ecological).

Local Indicators

The monitoring plan for the KVRI CFLRP includes the following local indicators and the parties responsible for the monitoring.

<u>Social Monitoring:</u>

- *Indicator*: Improvement of Skills (Idaho Forest Group; IPNF)

<u>Economic Monitoring:</u>

- *Indicator:* Number and kind of jobs created (Idaho Forest Group; IPNF)
- *Indicator:* Income and Wages for Local Contractors and Workers (Industry representatives)
- *Indicator:* Diversity of Wood Products Produced (Mills)

- *Indicator:* Value of Wood Products Produced (Industry representatives; Mills)

Ecological Monitoring: The Idaho Panhandle National Forests (IPNF) has the primary responsibilities for ecological monitoring because of quality control with data collection, data entry, and database management. The desire is that over time stakeholders and other volunteers can be trained and participate in the ecological monitoring.

- Vegetation Management Monitoring Elements
    - Vegetation Composition
    - Vegetation Structure
    - Acres treated by prescribed fire
- Aquatic Restoration Monitoring Elements
    - Change in miles of available habitat
    - Reductions in sediment delivery from improvement in roads in Riparian Conservation Areas and unstable land types
- Wildlife Habitat Restoration Monitoring Elements
    - Effectiveness of road management techniques
    - Vegetation as habitat components
    - Changes in road density
    - Changes in Bear Management Unit (BMU) standards
- Recreation Monitoring Elements
    - Miles of trail treated (maintained or reconstructed)
    - Miles of road maintained
    - Number of bridges replaced
- Invasive Species Monitoring Elements
    - Acres of weeds treated

We have just completed the sixth year of project implementation, and have been working to refine our monitoring protocols. We currently have performed or are in the process of performing the following monitoring in the key areas identified in our Monitoring Plan:

- Stocking surveys and post vegetation exams were completed on 300 acres within the project area. These surveys are the primary mechanism for monitoring vegetation composition and structure following treatment activities. These same areas are utilized to determine effectiveness of the treatment activities in meeting the silvicultural objectives. These areas are also instrumental in demonstrating the pre and post treatment condition of timber stands when visiting project areas with our collaborative.
- The Parker Ridge Fire burned approximately 6,720 acres within the CFLR project area in FY15 and 3,921 of those acres were managed for resource benefit. A monitoring plan has been developed and plots have been established to assess the effectiveness of this fire in meeting the landscape objectives of the CFLR project.
- Recreation staff monitored the condition of the Parker Ridge Trail to assess damages as a result of the 2015 Parker Ridge fire. All rehab work to trail was completed in FY2018. The trail work, water bars and other trail structures will continue to be monitored to determine their effectiveness in reducing the sediment that reaches Parker Creek.
- Zone aquatics staff are continuing to track fish populations and the presence of fish barriers within our stream systems and prioritizing opportunities to upgrade these structures. All new and upgraded

culverts and AOPs installed throughout the project area will be monitored to determine their effectiveness in providing additional miles of stream habitat.

- Zone wildlife staff has been tracking the changes in overall road densities within each Bear Management Unit (BMU) in the project area. They have also been monitoring the incremental gains, made by the Bonners Ferry Ranger District, in meeting the BMU standards outlined in the Grizzly Bear Access Amendment. All KVRI CFLR projects have the goal of balancing grizzly bear security needs and the need for road access. Currently work is being done in the Keno, Boulder, Grouse, and Bluegrass BMUs.
- Zone staff utilize the INFRA database together with local workplans to monitor and track the current status of the trail system and road system within the project area. This monitoring and planning is instrumental in prioritizing and assessing opportunities for improvements to these systems as we plan for each new project. An interactive program was made available on the Idaho Panhandle National Forest webpage in 2016 using data mined from INFRA. This programs allows the public to research the current status of all trails on the Forest.
- Zone weed and range staffs have been continually mapping the known populations of noxious weeds within the project area. All data collected is entered into a database to allow for improved monitoring of the size of existing populations and the mapping of new populations. This information will allow for improved efforts in controlling these populations.
- Zone botanist and weed staff have established a monitoring unit within the Deer Creek project area to measure the effects of differing fuels treatments on existing populations of weed species. The unit will have the same logging prescription, but the fuels will be treated in three different ways. These three subunits will then be monitored relative to existing and new populations of weeds.
- The Forest Range Specialist worked closely with the zone botanist, and regional ecologist to establish stronger monitoring protocols for the bog, fen, and peatland areas within the existing range allotments. This information will allow for better decision making related to grazing within these more sensitive ecotypes. The Range Specialist was assisted in 2018 by a retired county extension office employee.
- The Forest Soils Scientist continually monitors the pre and post condition of down woody debris in logging units throughout our project areas. This allows for better predictions of this material post-harvest and also provides a better prediction of future recruitment from residual standing trees.

Ecological monitoring by Forest Service personnel is a normal part of business in the project area and will continue indefinitely so long as funding allows for capacity. The economic monitoring associated with TREAT can also continue so long as TREAT continues to be supported nationally. The social monitoring will also continue due to the nature of how the Bonners Ferry Ranger District utilizes a collaborative approach to project planning and implementation. This collaborative approach assures regular feedback regarding the social impacts of all work, or lack of work, within the project area (Bonners Ferry Ranger District). Regular meetings with the Boundary County Commissioners is another valuable source of social and economic monitoring information relative to the impacts of work, or lack of work, within Boundary County.

6. FY 2018 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	164.0	$55,171.00
Acres of forest vegetation improved FOR-VEG-IMP	Acres	419.0	

Performance Measure	Unit of measure	Total Units Accomplished	Total Treatment Cost ($) *(Contract Costs)*
Manage noxious weeds and invasive plants INVPLT-NXWD-FED-AC	Acre	424.8	$3,600.00
Highest priority acres treated for invasive terrestrial and aquatic species on NFS lands INVSPE-TERR-FED-AC	Acres	NA	
Acres of water or soil resources protected, maintained or improved to achieve desired watershed conditions. S&W-RSRC-IMP	Acres	30.6	$321,529.00
Acres of lake habitat restored or enhanced HBT-ENH-LAK	Acres	9.8	$55,430.00
Miles of stream habitat restored or enhanced HBT-ENH-STRM	Miles	5.8	$265,599.00
Acres of terrestrial habitat restored or enhanced HBT-ENH-TERR	Acres	1,167.8	$57,608.00
Acres of rangeland vegetation improved RG-VEG-IMP	Acres	151.3	
Miles of high clearance system roads receiving maintenance RD-HC-MAINT	Miles	57.2	
Miles of passenger car system roads receiving maintenance RD-PC-MAINT	Miles	38.1	
Miles of road decommissioned RD-DECOM	Miles	0[5]	
Miles of passenger car system roads improved RD-PC-IMP	Miles	14.7	
Miles of high clearance system road improved RD-HC-IMP	Miles	31.9	
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	4.0	
Number of stream crossings constructed or reconstructed to provide for aquatic organism passage STRM-CROS-MTG-STD	Number	3	$238,591.00
Miles of system trail maintained to standard TL-MAINT-STD	Miles	262.5	
Miles of system trail improved to standard TL-IMP-STD	Miles	27.7	
Miles of property line marked/maintained to standard LND-BL-MRK-MAINT	Miles	NA	
Acres of forestlands treated using timber sales TMBR-SALES-TRT-AC	Acres	1,847.0	
Volume of Timber Harvested TMBR-VOL-HVST	CCF	34,406.1	
Volume of timber sold TMBR-VOL-SLD	CCF	53,116.1	
Green tons from small diameter and low value trees removed from NFS lands and made available for bio-energy production BIO-NRG	Green tons	9,476.5	

[5] RD DECOM not included under this Performance Measure but accomplished on the ground was 3.3 miles of non-system roads under the Meadow Creek Timber Sale and Templemental Stewardship Sale.

Performance Measure	Unit of measure	Total Units Accomplished	Total Treatment Cost ($) *(Contract Costs)*
Acres of hazardous fuels treated outside the wildland/urban interface (WUI) to reduce the risk of catastrophic wildland fire FP-FUELS-NON-WUI	Acre	767.0	
Acres of wildland/urban interface (WUI) high priority hazardous fuels treated to reduce the risk of catastrophic wildland fire FP-FUELS-WUI	Acres	2,442.0	$171,250.80
Acres mitigated FP-FUELS-ALL-MIT-NFS	Acres	2,648	$124,196.50
Please also include the acres of prescribed fire accomplished	Acres	523	
TMBR-BRSH-DSPL	Acres	566.0	
Number of priority acres treated annually for invasive species on Federal lands SP-INVSPE-FED-AC	Acres	NA	
Number of priority acres treated annually for native pests on Federal lands SP-NATIVE-FED-AC	Acres	NA	

Units accomplished should match the accomplishments recorded in the Databases of Record.

7. **FY 2018 accomplishment narrative** – Summarize key accomplishments and evaluate project progress *not already described elsewhere* in this report. (Please limit answer to three pages.)

FY2018 Planning and Future Implementation -

The KVRI Forestry Subcommittee, a subset of the parent KVRI collaborative, met frequently in collaborative meetings and field trips during FY2018 in support of project planning on the Bonners Ferry Ranger District. The project planning for FY2018 consisted of NEPA on the Boulder Creek EA and the Camp Robin EA.

The Forest has strongly emphasized work within the CFLRP area by directing funding and resources to accomplish the NEPA associated with the Boulder Creek and Camp Robin EAs. Both of these projects will have signed decisions in FY2019. The Forest has also accelerated the implementation efforts of these two projects by prioritizing them in the Forest's 5 year vegetation management plan. This will result in three timber sales being offered in these project areas in FY2019. These sales have been designed to accomplish a full suite of restoration activities and to strongly leverage all timber values to help fund those restoration activities. The NEPA Strike Team, Region 1 Timber Strike Team, external contractors, Stewardship Contracting, and Good Neighbor Authority are all being utilized to support the NEPA and implementation of these two projects.

The purpose and need, as identified by the KVRI collaborative group for the Boulder Creek and Camp Robin projects, is to:

1. Improve and maintain forest health in the ecosystem composition, structure, and diversity of the landscape by providing for tree species and stocking levels similar to historic levels which will better resist insects, diseases and wildfire,
2. Improve habitat and forage for big game through vegetation treatments and broadcast burning,
3. Enhance the scenic integrity of the area by softening the boundaries of previous harvest units and avoiding straight lines and hard edges when designing treatment areas within these projects, and
4. Maximize opportunities to utilize forest products and provide economic opportunity through restoration work.

8. **The WO (EDW) will use spatial data provided in the databases of record to estimate a treatment footprint for your review and verification**.

- **If the estimate is consistent and accurate**, please confirm that below and skip this question.
- **If the gPAS spatial information 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). What was the total number of acres treated?

Fiscal Year	Footprint of Acres Treated (without counting an acre of treatment on the land in more than one treatment category)
FY 2018	2,571.52 acres
Estimated Cumulative Footprint of Acres (2010 or 2012 through 2018)	FY12 – 2,300 acres (from previous annual report) FY13 – 2,440 acres (from previous annual report) FY14 – 5,795 acres (from previous annual report) FY15 – 8,263 acres (from previous annual report) FY16 – 3,785 acres (database estimate) FY17 – 4,546.88 acres FY18 – 2,571.52 acres Total Treatment Footprint through FY17 – 29,702 acres

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

9. **Describe any reasons that the FY 2018 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 Forest Service utilizes stewardship contracting as an effective means of selling timber and accomplishing the myriad of other restoration work needed within each project area. The Deer Creek Stewardship contract was awarded in FY2018 and included road maintenance within the stewardship contract area and provided for contract road maintenance and reconstruction work in another timber sale area within the project boundary. This resulted in higher than expected road maintenance accomplishment in FY2018, but greatly aided our ability to sell the 2nd timber sale. FY2018 also saw a higher than predicted trail maintenance accomplishment due to the high level of volunteer hours and support for the trails program.

10. Planned FY 2019 Accomplishments

Performance Measure Code	Unit of measure	Work Plan 2019	Planned Accomplishment For 2019	Amount ($)
Acres of forest vegetation established FOR-VEG-EST	Acres		300	
Manage noxious weeds and invasive plants INVPLT-NXWD-FED-AC	Acre		400*	
Miles of stream habitat restored or enhanced HBT-ENH-STRM	Miles		9	
Acres of terrestrial habitat restored or enhanced HBT-ENH-TERR	Acres		500*	

Performance Measure Code	Unit of measure	Work Plan 2019	Planned Accomplishment For 2019	Amount ($)
Miles of road decommissioned RD-DECOM	Miles		1.2	
Miles of passenger car system roads improved RD-PC-IMP	Miles		10*	
Miles of high clearance system road improved RD-HC-IMP	Miles		20*	
Volume of timber sold TMBR-VOL-SLD	CCF		50,000	
Green tons from small diameter and low value trees removed from NFS lands and made available for bio-energy production BIO-NRG	Green tons		10,000*	
Acres of hazardous fuels treated outside the wildland/urban interface (WUI) to reduce the risk of catastrophic wildland fire FP-FUELS-NON-WUI	Acre		300	
Acres of wildland/urban interface (WUI) high priority hazardous fuels treated to reduce the risk of catastrophic wildland fire FP-FUELS-WUI	Acres		1,250	

Please include all relevant planned accomplishments, assuming that funding specified in the CFLRP project proposal for FY 2019 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 2019 accomplishments and/or funding differs from CFLRP project work plan** (no more than 1 page): If do want to compare lifetime goals to date, link here.

FY2019 planned accomplishments will likely exceed some of the initial projections due to increased pace and scale across the entire Forest. This increased delivery means that some out-year timber sales and restoration work in the CFLRP area have been moved ahead to FY2019.

12. **Please include an up to date list of the members of your collaborative if it has changed from previous years.**

KVRI Contact List			
Name	***Representing/ Area of Interest***	***Phone***	***Email***
Adam Arthur	(Alt.) City of Bonners Ferry, KVRI Co-Chair	208.267.3105	adamea77@gmail.com
Angela Cooper	(Alt.) Kootenai Tribe of Idaho (KTOI), KVRI Co-Chair	208.267.3519	acooper@kootenai.org
Bob Blanford	Business/Industry	208.290.4659	bob.blanford@gmail.com
Brad Corkill	Idaho Fish & Game Commission	208.682.4602	bradcorkill@whitemanlumber.com
Chip Corsi	(Alt.)Idaho Fish & Game Commission	208.769.1414	charles.corsi@idfg.idaho.gov
Dan Dinning	Boundary County Commissioners, KVRI Co-Chair	208.267.7723 208.290.7758	dmding@frontier.com
David Sims	Mayor City of Bonners Ferry, KVRI Co-Chair	208.267.3105	dsims@bonnersferry.id.gov
Dave Gray	(Alt.) Social/Cultural/Historical	208.267.2576	daddg@frontier.com
Dave Wattenbarger	Soil Conservation District/ Landowner	208.267.7468	daveandjeanw@yahoo.com
Don Allenberg	(Alt.) Corporate Agriculture/Landowner	208.267.8569	don.allenberg@anheuser-busch.com
Ed Atkins	Corporate Agriculture/Landowner	208.267.8569	ed.atkins@anheuser-busch.com
Gary Aitken Jr.	Kootenai Tribe of Idaho (KTOI), KVRI Co-Chair	208.267.3519	garyjr@kootenai.org
Jim Cadnum	Landowner/Industry	208.267.5776	jkcornman@gmail.com
Kennon McClintock	(Alt.) Conservationist/Environmentalist	208.267.8999 208.255.9158	kmcclintock@tnc.org
Kevin Knauth	(Alt.) U.S. Forest Service- IPNF	208.267.6701 208.691.7657	kevinsknauth@@fs.fed.us
LeAlan Pinkerton	(Alt.)Boundary County Commissioners, KVRI Co-Chair	208.267.7723	pink4caz@yahoo.com
Jeanne Higgins	U.S. Forest Service- IPNF	208.765.2223	jmhiggins@fs.fed.us
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Sandy Ashworth	Social/Cultural/Historical	208.267.3803	shoeboxacres@hotmail.com
Sherrie Cossairt	KTOI/KVRI Recording Secretary	208.267.3519	scossairt@kootenai.org
Tim Dillin	(Alt.)Soil Conservation District/ Landowner	208.267.7192	tdillin@hotmail.com
Tim Dougherty	(Alt.)Business/Industry	208.290.6562	tdougherty@idfg.com

13. **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.

Spring Creek AOP - We replaced an 18" culvert on a spring-fed tributary to Placer Creek that was a complete barrier to upstream fish migration. This tributary provides the majority of flow into Placer Creek during the summer months. This project restored access to approximately 2000' of high quality spawning and rearing habitat and cold water refuge for the resident population of westslope cutthroat trout.

Figure 3: Spring Creek prior to (left) and after (right) AOP replacement.

Figure 4: Spring Creek tributary before (left) and after (right) AOP replacement.

Stream and Lakeside Habitat Restoration - This year we will highlight the tremendous amount of trail work done yearly on this district, using CFLN funds and matched with an amazing amount of partner and volunteers. The trail crew along with various partners/volunteers restored riparian and lakeside habitat to reduce soil and water erosion, and to re-establish native vegetation at two lakes in the Kootenai River Watershed. The first two pictures show the planting and native debris placement in a highly used recreation area at Hidden Lake in the Selkirk Mtns. The second two pictures show the boardwalk built to protect the sensitive riparian habitat, along with native vegetation planting at Divide Lake in the Cabinet Mtns.

Figure 5: Planting and native debris placement at Hidden Lake in the Selkirk Mtns.

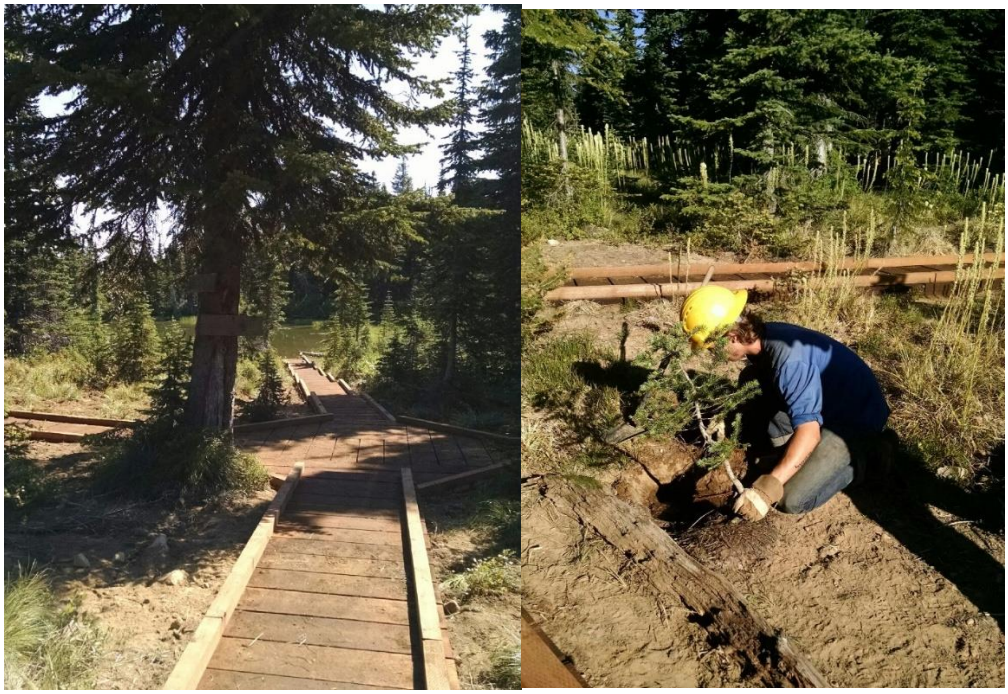

Figure 6: Boardwalk built to protect sensitive riparian habitat (left) and native vegetation planting (right) at Divide Lake in the Cabinet Mountains.

Solomon Lake Campground restoration work analyzed in the Deer Creek Project. The road, campground, and boat launch restoration work was completed with a combination of stewardship contracts and recreation grants.

Figure 7: Main Solomon Lake Campground road with campground loop to the right. Subsequent work by rec crew installed parking blocks and stabilization material.

Figure 8: Boat launch reconstructed to reduce sediment flow into Solomon Lake.

Signatures:

Recommended by (Project Coordinator(s)): /s/ Matt Staudacher

Approved by (Forest Supervisor(s)): /s/ Jeanne Higgins

Draft reviewed by (collaborative chair or representative): /s/ Kevin Knauth