CFLR Project (Name/Number): Lakeview Stewardship Project CFLR016

National Forest(s): Fremont-Winema National Forest

1. CFLRP Expenditures, Match, and Leveraged Funds:

a. FY20 CFLN and Matching Funds Documentation

Fund Source – (CFLN Funds Expended)	Total Funds Expended in Fiscal Year 2020
CFLN20	$2,422,076

This amount should match the amount of CFLN dollars obligated 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 – (FS Matching Funds)	Total Funds Expended in Fiscal Year 2020
NFRW	$9,930*
NFTM	$337,074*
NFWF	$277,629*
NFHF	$277,932*
CMRD	$54,894*
FSRM	$12,588*
SRS2	$57,000*

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) listed below. Per the updated Program Funding Guidance, federal dollars spent on non-NFS lands (for example, through Wyden authority) may be included here if aligned with CFLRP proposal implementation within the CFLRP landscape. NOTE: In FY20, projects received their allocation only in CFLN – there are no "Washington Office funds" to report.

* Totals do not appear in the Agency database of record.

Fund Source – Partner Match	In-Kind Contribution or Funding Provided?	Total Estimated Funds/Value for FY20	Description of CFLRP implementation or monitoring activity	Where activity/item is located or impacted area
Rocky Mountain Elk Foundation	☐ **In-kind contribution** ☒ **Funding** Budget Line Item, if relevant:[1] *NFXN*	**$15,000**	**Aspen and Meadow Restoration**	☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**
Northwest Youth Corp	☒ **In-kind contribution** ☐ **Funding** Budget Line Item, if relevant: [1]	**$22,020**	**Trail maintenance**	☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**

[1] If funding from partner(s) is captured in USFS database (such as NFEX, SPEX, WFEX, CMEX, or CWFS), please provide Budget Line Item here. See CFLRP FMMI expenditure report for reference.

Fund Source – Partner Match	In-Kind Contribution or Funding Provided?	Total Estimated Funds/Value for FY20	Description of CFLRP implementation or monitoring activity	Where activity/item is located or impacted area
Lake County Resources Initiative	☒ **In-kind contribution** ☐ **Funding** Budget Line Item, if relevant: [1]	**$70,902**	**Ecological Monitoring**	☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**
University of Oregon	☒ **In-kind contribution** ☐ **Funding** Budget Line Item, if relevant: [1]	**$6,177**	**Social/Economic Monitoring**	☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**
Northwest Youth Corp	☒ **In-kind contribution** ☐ **Funding** Budget Line Item, if relevant: [1]	**$32,530**	**Aspen and Meadow Restoration**	☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**
Lake County Cooperative Weed Management Area	☒ **In-kind contribution** ☐ **Funding** Budget Line Item, if relevant: [1]	**$35,609**	**Invasive weed treatments**	☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**
Lake County Umbrella Watershed Council	☒ **In-kind contribution** ☐ **Funding** Budget Line Item, if relevant: [1]	**$7,078**	**Forest Mapping and Assessment**	☐ **National Forest System Lands** ☒ **Other lands within CFLRP landscape:**
Lake County Umbrella Watershed Council	☒ **In-kind contribution** ☐ **Funding** Budget Line Item, if relevant: [1]	**$110,000**	**Forest Restoration Thinning**	☐ **National Forest System Lands** ☒ **Other lands within CFLRP landscape:**
Oregon Department of Forestry	☒ **In-kind contribution** ☐ **Funding** Budget Line Item, if relevant: [1]	**$6,444**	**Timber Layout**	☒ **National Forest System Lands** ☐ **Other lands within CFLRP landscape:**

Total partner in-kind contributions for implementation and monitoring of a CFLR project across **all lands** within the CFLRP landscape.

Service work accomplishment through goods-for services funding within a stewardship contract (for contracts awarded in FY20)	**Totals**
Total revised non-monetary credit limit for contracts awarded in FY20	$4,600
Revenue generated through Good Neighbor Agreements	**Totals**
	$0

Revised non-monetary credit limits 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. Information for contracts awarded prior to FY20 were captured in previous annual reports. 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. 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***.

FY2020 Overview

FY20 Activity Description (Agency performance measures)	**Acres**
Number of acres treated by prescribed fire	3,030 acres
Number of acres treated by mechanical thinning	1,797 acres
Number of acres of natural ignitions that are allowed to burn under strategies that result in desired conditions	0 acres
Number of acres treated to restore fire-adapted ecosystems which are maintained in desired condition	0 acres
Number of acres mitigated to reduce fire risk	1,916 acres

Please provide a narrative overview of treatments completed in FY20, 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?

- **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.

  In 2014, the Fremont-Winema National Forest developed an Accelerated Restoration and Priority Landscape document to help support and guide decisions at the Forest and local level. This process delineated large landscapes (generally >100,000 acres) and prioritized them based on the following variables: Regional and National priorities (i.e. Watershed Condition Framework, Terrestrial Restoration and Conservation Strategy, Oregon Conservation Strategy, and R6 Aquatic Restoration Strategy), past management, large tree structure, Wildland Urban Interface (WUI), crown fire potential, and landscape fire opportunities. Landscapes were then prioritized as high, moderate, or low. This has guided the NEPA planning and implementation of projects within the Lakeview Stewardship CFLRP.

  The Klamath-Lake Forest Health Partnership (KLFHP) then used the Fremont-Winema NEPA priority landscapes to guide the priority and selection of cross-boundary landscape-scale restoration projects within Lake and Klamath Counties. The KLFHP is a 501(c)(3) nonprofit organization in South Central Oregon with a mission to "facilitate restoration projects on public and private forestland in Klamath and Lake Counties through education, outreach, and diverse partnerships." KLFHP partners conducted a risk assessment of all private lands within the

counties to determine the focus for all lands restoration. A variety of risk rating criteria were considered including land ownership, broad vegetation classes, fire history, communities at risk identified in the Community Wildfire Protection Plans and the Oregon State Communities at Risk Project, and personal knowledge of the landowners and communities.

Based on this risk assessment, the North Warner Multi-Ownership Forest Health Project was selected in 2016 and Thomas Creek All Lands Project was selected in 2019 as a priority for focused restoration and shared stewardship across public and private land. The Thomas Creek Project is at the beginning phases of planning for upland dry forest restoration, while the North Warner Project is moving into the maintenance stage with the use of prescribed fire. These two KLFHP focused landscapes, titled the Lake County All Lands Restoration Initiative, are now building upon each other, while increasing the geographic area of forest restoration, wildfire risk reduction, improvements in aquatic and wildlife habitat, and overall resiliency. The KLFHP has written a Strategic Action Plan for the *Lake County All Lands Restoration Initiative* and has submitted several grants in 2020 to leverage future funding including a Joint Chiefs Landscape Restoration Partnership, Landscape-Scale Restoration State and Private, and Oregon Watershed Enhancement Board.

- **Please tell us whether these treatments were in "high or very high wildfire hazard area** from the "wildfire hazard potential map" (https://www.firelab.org/project/wildfire-hazard-potential)

  Most of the treatments within the Lakeview Stewardship CFLRP are in the "high" to "moderate" wildfire hazard areas, according to the national wildfire hazard potential map. In 2020, approximately 44% of the treatments were in WUI as identified in the Lake County Community Wildfire Protection Plan.

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

  When all partners agree to the priority of focused landscapes and shared stewardship of that landscape, it is much easier to obtain support and funding. The Lake County All Lands Restoration Initiative is a great example. The partners are working together from planning through implementation to restore this landscape across ownership boundaries. With grant funding, the KLFHP was able to complete a mapping and inventory of 80,565 of private lands for 100+ landowners. Each vegetation association was delineated and assessed to evaluate 1) risk of disturbance, 2) recommendations for forest health treatments, 3) priority for treatment, and 4) funding needs within the larger landscape, beneficial for private landowners to determine forest management treatment options and/or to develop forest management plans for their property. Data was also collected for riparian, juniper, and invasive vegetation. The inventory of private land allowed partners to prioritize stands for treatment based upon density of conifers, surface fuel loading, and relative risk of disturbance. The partners worked together to assess the condition and priority for treatments.

  This data was then used to obtain funding from a variety of sources. The partners have used CFLR funding to leverage funding for dry forest restoration totaling approximately $4 million for private lands and $5 million for federal lands. To date, approximately 11,077 acres of private and 12,670 acres of federal land dry forest restoration have been completed, and the partners are currently working together to prepare for cross-boundary prescribed fire. The shared stewardship approach -- 1) setting priorities at the County and project scale, 2) assessing and mapping current conditions across public and private land, 3) prioritizing treatments within a focused landscape, and 4) implementing cross-boundary forest restoration has resulted in additional funding, acres treated, and increased scale of dry forest restoration.

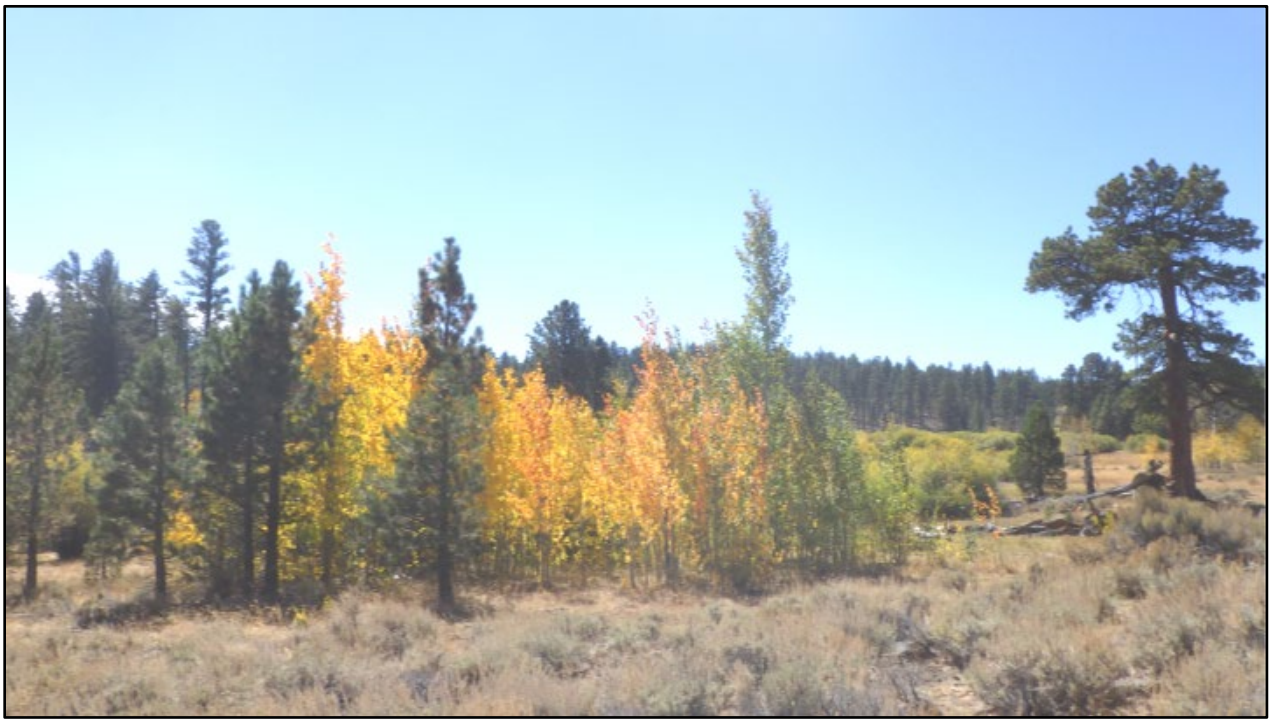
  Partners are hopeful that the extensive thinning across public and private lands will set the stage for introducing fire as an ecological process and maintaining the thinning treatments in the short- and long-term. Partners are working to develop landscape prescribed burn plans and the necessary agreements that allow for prescribed fire across public and private lands.

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.

Photos

Post Treatment Pre-Commercial Thinning in the Crooked Mud Honey Project

Aspen Restoration Pre-Treatment



Aspen Restoration Post-Treatment

Burnt Creek Streambank Enhancement Before

Burnt Creek Streambank Enhancement After

Deer Creek Culvert Replacement Before

Deer Creek Culvert Replacement After

NYC and YCC Crews

Forest Health Brochure for Private Landowners

Working together we are making changes … towards healthier forests

Current Forest Conditions

Today our forests in Lake and Klamath Counties are in jeopardy. Insect infestations, overstocked Western juniper, and an altered fire regime have all led to heavy fuel loads. A single lightning strike today has a greater probability of creating a catastrophic wildfire that will burn hotter and more intensely than historical natural fire. Our forests need **YOUR HELP** to be restored to their once-resilient state and reverse these trends.

The Landscape Approach

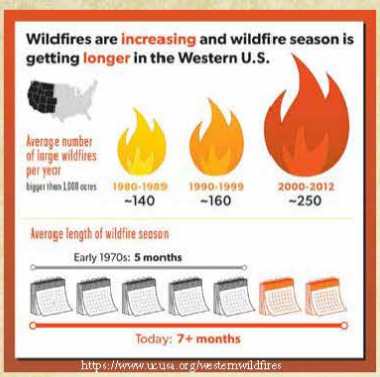
Private landowners, along with state and federal entities must work together across jurisdictional boundaries to effect change on a landscape level. To restore ecological resiliency to our forests and ensure economic viability of our communities, Klamath-Lake Forest Health Partnership (KLFHP) is providing technical and financial support to forest landowners in critical areas with the greatest opportunity for impact across public and private land.

What Do We Do?

The KLFHP utilizes an 8-step process to implement private forestland restoration (catalog.extension.oregonstate.edu/pnw707). We work with landowners to map their forest resources and fire risk at no cost or obligation to them. We can provide information about the condition of your forest and recommendations on how to reduce your wildfire risk, and discuss treatment options best-suited for your property management goals and the landscape.

What Can You Do?

- **Participate**
  Have your forest land inventoried and mapped to better understand the current conditions and potential risk of wildfires.
- **Reduce Fuels**
  Implement forest thinning, juniper removal, and brush clearing as recommended to improve health and reduce risk.
- **Maintain**
  Develop a management plan for your forest to maintain treated areas through mechanisms such as thinning and prescribed fire.



Klamath-Lake Forest Health Partnership
www.KLFHP.org

Lake County Umbrella Watershed Council
www.lakecountywsc.com
Uplands Coordinator: Autumn Larkins
lakecountywsc@gmail.com
541-817-5649

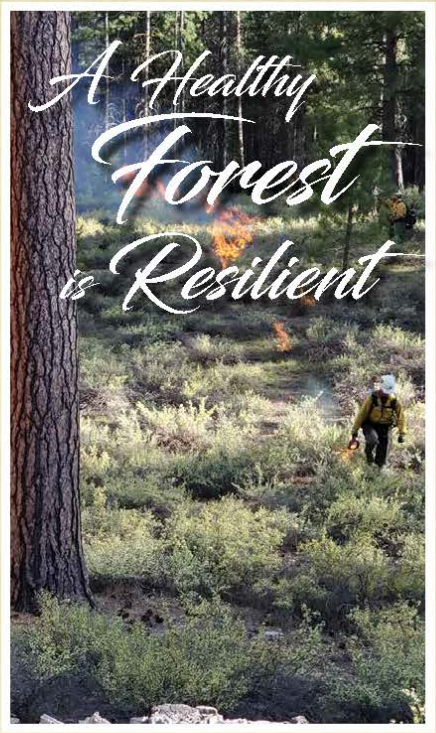
Klamath Watershed Partnership
www.klamathpartnership.org
Project Manager: Leigh Ann Vradenburg
lvradenburg@klamathpartnership.org
541-850-1717

Oregon State University
Klamath Basin Research and Extension Center

NRCS
Natural Resources Conservation Service

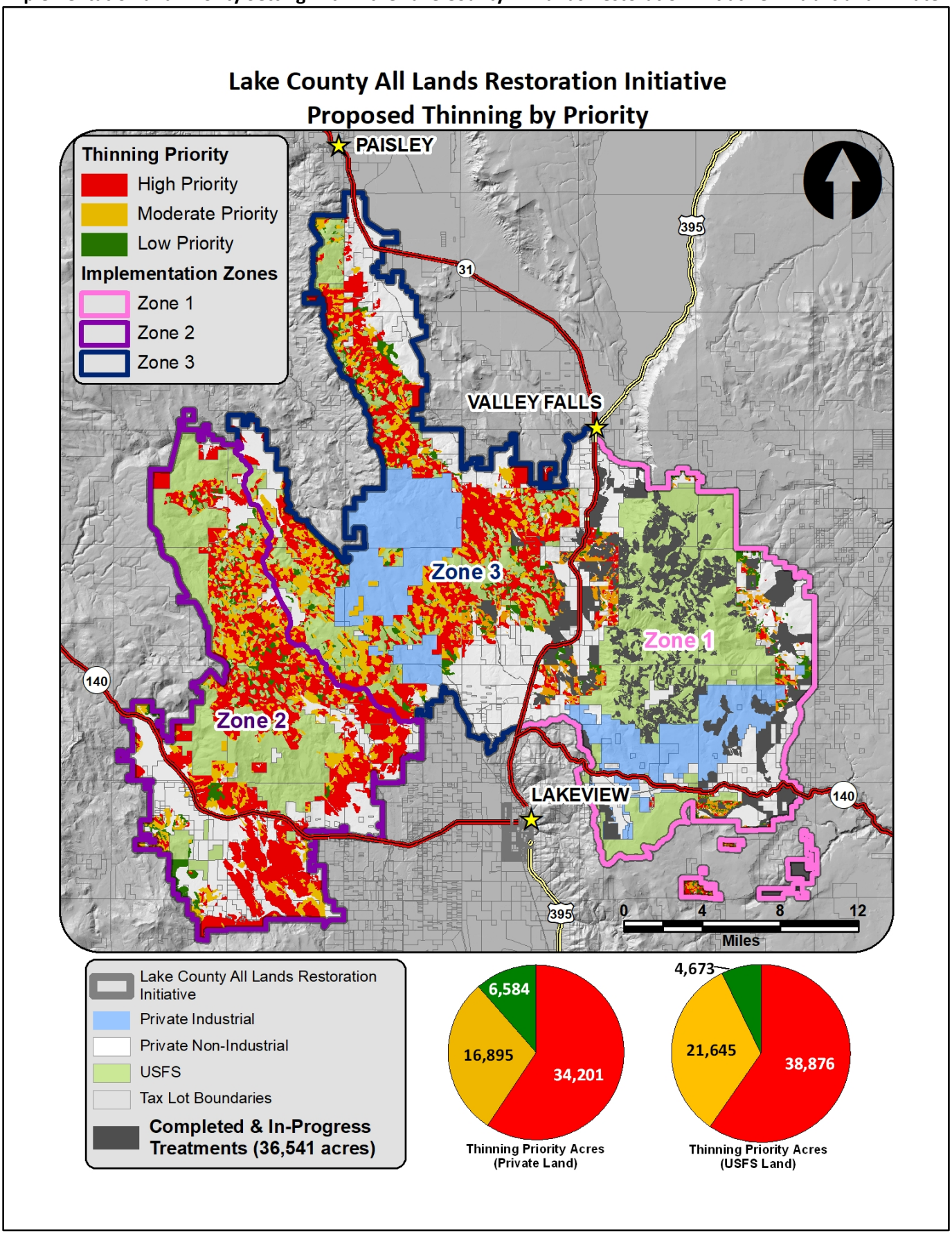
The Nature Conservancy

Lake County Umbrella Watershed Council
Autumn Larkins
PO Box 848
Lakeview, OR 97630



Forest Restoration in Lake & Klamath Counties

Implementation and Priority Setting within the Lake County All Lands Restoration Initiative – Public and Private



Expenditures

Category	**$**
FY2020 Wildfire Preparedness[2]	$2,125,000
FY2020 Wildfire Suppression[3]	$19,100,000
The cost of managing fires for resource benefit if appropriate (i.e. full suppression versus managing)	$0.00
FY2020 Hazardous Fuels Treatment Costs (CFLN)	$436,000
FY2020 Hazardous Fuels Treatment Costs (other BLIs)	$50,000

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.

Treatments that have been implemented lead to reducing fire suppression costs and improving the ability to control fires. In general, where treatments intersect with wildfires, there is reduce fire behavior which has contributed to a reduction in effort and resources needed to facilitate control of the fire. The places where treatments occurred were the areas that allowed fire fighters to have a high probability of success with their containment options. In 2020, the Brattain Fire occurred under extreme weather conditions and there were very limited resources available due to the extensive wildfire activity across the West. Under these conditions, previous treatments become less effective in controlling spread and reducing costs.

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:

There have not been any assessments or reports at this time that have been conducted within the CFLN landscape regarding cost reduction, cost avoidance, etc.

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

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.**

The FTEM report for the Brattain, Crane, and Ben Young Fires are included in Appendix A below. The BLIs used for each treatment unit is unknown because most treatments were completed before the Lakeview CFLR Project was funded. Most of the treatments had input and support from the Lakeview Stewardship Group (LSG) through the NEPA process. Values at risk are many, with the priority being human life, private industrial and non-industrial property, and natural resources.

[2] 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).

[3] 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.

There was coordination between public and private land management on the north end of the Brattain Fire where prescribed fire and juniper reduction were completed within the Jakabe Project 15-20 years ago. Completed treatments did help to protect these values but were not always as successful as desired. Many of the treatments within these fires did reduce the fire behavior, some treatments were more successful than others. Treatments that removed fuel (timber sales, pile and burn, and/or under burning) often minimized fire behavior to an extent that suppression efforts were more successful.

One key aspect of treatments that specialists have observed is that the placement on the landscape plays a vital role in minimizing the effects of a wildfire. Treatments planned and completed adjacent to each other (linking treatments together without vast untreated land between them) is also key to protecting adjacent values. Treatments that were not connected with other treatments or not located in an ideal location, did not provide the desired outcome. Individual small-scale treatments within a fire footprint were often too small to make a difference in the fire behavior. In conclusion, large areas of treatments linked together and located appropriately on the landscape, have the best chance of being successful at minimizing wildland fire effects.

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

Brattain and Ben Young Fire – The Brattain (50,952 acres) and Ben Young (1,234 acres) Fires burned adjacent to each other. Combined, the two fires burned 23,892 acres of USFS, 10,272 acres of BLM, and 18,022 acres of private land. On USFS land only, 1,150 (5%) were unburned and 17,320 (72%), 5,085 (21%), and 337 (1%) acres were burned low, moderate, and high severity respectively. A total of 9,010 acres burned within the Thomas Creek Landscape Restoration Project in which a decision was signed Nov. 25, 2019. The Thomas Creek Landscape Restoration Project is very large and authorizes forest restoration on approximately 95,000 acres total. The Brattain and Ben Young Fires impacted only 4% or 4,043 acres of the area authorized for restoration. Due to the shelf stock of restoration covered under NEPA, these fires will not impact the Forest's ability to meet timber or fuels targets.

Crane Fire – The Crane Fire burned a total of 2,981 acres, of which 2,970, 4, and 7 acres are USFS, BLM, and private respectively. On USFS land only, 435 acres were unburned and 1,188, 970, and 376 acres were burned low, moderate, and high severity respectively. The Crane Fire burned within the South Warner Landscape Planning Area in which the NEPA process started in 2020. The Forest has not yet developed a proposed action, so the specific impacts to the project are unknown. However, much of the Crane Fire burned within the Crane Mountain Semi-Primitive Motorized Roadless (1,940 acres). Outside of the roadless area, much of the area is inaccessible by road or non-forested. Therefore, the Crane Fire had little impact on potential areas for future restoration within the South Warner Landscape Planning Area.

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.

In 2020, there were 20 fires that burned within the project area and contained at a very small scale (<0.5 acres) using initial attack. With an estimated preparedness budget of $2,125,000 and suppression budget of $100,000, all 20 fires were contained at a small size. The Brattain, Ben Young, and Crane Fires were not contained by initial attack. The estimated suppression budget for the Crane Fire is $6,264,585, Brattain Fire is $10,222,204, and Ben Young Fire is $2,560,536. The acres that achieved resource benefit have not been calculated yet because the fires have not been officially called out at the time of this report. It is estimated a total of 20,000 acres achieved resource benefit by the unplanned ignitions within the Lakeview CFLRP. None of these acres will be able to be utilized for fuels target accomplishment as all three fires were human caused.

A BAER report was completed for the Brattain and Crane Fires, but not deemed necessary for the Ben Young Fire. The BAER effort for the Crane Fire did not identify any needs and therefore did not request any funding. The BAER report requested the following funding for the Brattain Fire:

Summary of the Brattain Fire BAER request:

Treatment	Unit	Unit Cost	# of Units	Total Cost
Invasive Plant Surveys/Detection	Acre	$70	165	$11,550
Invasive Plant Treatments	Acre	$150	40	$6,000
Storm Proofing Roads	Miles	$3,492	1.8	$6,286
Storm Inspection/Response	Days	$2,197	6	$13,182
Trail Drainage	Each	$850	2.7	$2,295
Road Hazard Signs	Each	$335	2	$670
Road Closure Gates	Each	$8,750	2	$17,500
Trail Hazard Signs	Each	$150	22	$3,300
Hazard Tree Mitigation	Each	$92	14	$1,196
			Total	**$61,979**

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.

TREAT analyzes for an "impact area," which is defined as Lake County for the Lakeview Stewardship CFLRP. Only funding that went to contractors located within this impact area were included in the calculations. It was estimated that 8% of the CFLN funds and 5% of the total funds (CFLR and matching) were used to fund contractors from Lake County for service work project activities such as invasive plant treatments or monitoring. Contracting funds that were expended on contracts that went to firms outside the impact area contribute to leakage from the local economy. Twenty-eight percent (28%) of the CFLR funds and 36% of the total funds (CFLR and matching) were used for Forest Service personnel related to implementing projects and monitoring. Commercial forest product activities considered in the TREAT analysis consisted of 1,634 CCF harvested from the National Forest in the CFLR landscape in FY20, and all the saw timber was processed locally at the Collins Pine Sawmill.

FY 2020 Jobs Supported/Maintained (CFLN and matching funding):

FY 2020 Jobs Supported/Maintained	Jobs (Full and Part-Time) (Direct)	Jobs (Full and Part-Time) (Total)	Labor Income (Direct)	Labor Income (Total)
Timber harvesting component	2	2	$157,921	$175,535
Forest and watershed restoration component	2	2	$21,956	$38,043
Mill processing component	2	3	$126,337	$180,923
Implementation and monitoring	23	25	$909,083	$961,968
Other Project Activities	2	2	$51,066	$61,857
TOTALS:	30	35	$1,266,363	$1,418,326

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)
# Cross-institutional agreements/policies	The National Cohesive Wildfire Fire Management Strategy includes the objective to "restore and maintain landscapes, such that landscapes across all jurisdictions are resilient to fire-related disturbances in accordance with management objectives." The Lake County All Lands Restoration Initiative is a landscape level project involving 200+ private landowners, 8 federal, state, and county agencies, and 7 non-governmental partners. The goal of the partnership is to collaborate across ownership boundaries to implement forest health treatments with a goal of creating a seamless, healthy forest landscape resilient to natural disturbance. The partners have used CFLR funding to leverage funding for dry forest restoration totaling approximately $4 million for private lands and $5 million for federal lands. To date, approximately 11,077 acres of private and 12,670 acres of federal land are completed. Key partners have worked closely to provide the resources for private landowners to manage their properties based upon the landowner's objectives. With the integration of resources, the partners have been successful in finding opportunities to implement private land treatments concurrently with adjacent federal treatments. The partners are also maximizing use of all authorities, agreements, and understandings to increase pace and scale of restoration within the project area. There are currently agreements being utilized within the project including: 1) a Good Neighbor Authority Agreement between USFS and ODF for forestry services, 2) multiple participating agreements between agencies and organizations, and 3) a cooperative agreement between the NRCS and ODF that allows ODF to provide technical forestry assistance to implement the Environmental Quality Incentives Program (EQIP).	In 2020, the KLFHP wrote a Strategic Action Plan for the Lake County All Lands Restoration Initiative which is located within the Lakeview Stewardship CFLRP klfhp.org/sap. The process for planning and implementing landscape-scale cross-boundary restoration was published in Oct. 2018. This includes details on a case study for the North Warner Project (Chapter 11 p. 40-46). https://catalog.extension.oregonstate.edu/pnw707
Relationship building/ collaborative work	In the fall of 2019, the 2016/2017 social-economic report for the Lakeview CFLRP was published. This report mentions: "Many of the partnership agreements during FY 2016 and 2017 are the result of longstanding efforts and relationships with partners in the Lakeview CFLR project area and have broad local socioeconomic benefits in addition to providing the capacity needed to accomplish project activities."	2016/2017 Social-Economic Report for the Lakeview CFLR Project. https://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/WP_97.pdf

Indicator	Brief Description of Impacts, Successes, and Challenges	Links to reports or other published materials (if available)
Project partnership composition	The effectiveness of the Lakeview CFLR and Joint Chiefs projects stems from the partners involved in both the LSG and the KLFHP. The Forest Service works in cooperation with the LSG, a 20-year-old collaboration of conservationists, timber industry workers, local government officials, and other civic leaders. The LSG works very closely with the partners to ensure this project achieves the goals identified in the Long-Range Strategy for the Lakeview Federal Stewardship Unit. KLFHP formed in 1995, is an interagency and landowner collaborative organization with a mission "to facilitate restoration projects on public and private forestland in Klamath and Lake Counties through education, outreach, and diverse partnerships." The KLFHP, which includes private landowners, university, federal, state, and county agencies, and non-governmental partners, is actively supporting this project through landowner outreach, education, and the pursuit of funding to support restoration on private land. Key partners include Oregon Department of Forestry, Oregon State University Extension, Natural Resources Conservation Service, Fremont-Winema National Forest, Lake County Watershed Council, and several private landowners. See question #12 below for details on the organizational merger between the LSG and KLFHP.	Long Range Strategy https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5356799.pdf Klamath-Lake Forest Health Partnership – klfhp.org
Economic dependency/sectors impacted/expanding market development	The population of Lake County has economic and social conditions that differ in several ways from the statewide averages. The County has an older population, higher unemployment, and a greater percentage of residents in poverty. The forest health treatments associated with Lakeview CFLRP and North Warner Joint Chiefs have resulted in local contracts and jobs in the woods and at the mill. Secondary benefits include contractors' expenditures in the rural community of Lakeview such as hotels, gas, groceries, etc. This is reflected in the TREAT analysis which reflects a total of 35 direct and indirect jobs resulting from the funding dedicated to this project. In the rural community of Lakeview, this is a significant impact to the local economy. In addition, there is only one mill remaining in Lake County. This mill is critical to our ability to implement forest restoration. This project has resulted in a continued supply of wood to the local mill which is extremely beneficial to the local economy. Another important highlight is that Red Rock Biofuels that broke ground in Lakeview in 2018 is nearly completed. This plant will open new opportunities for biomass utilization on private land in the spring of 2021.	2012/2013, 2014/2015, and 2016/2017 Social-Economic Reports for the Lakeview CFLR Project. https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3848988.pdf https://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/WP_83.pdf https://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/WP_97.pdf Red Rock Biofuels Lakeview Site https://www.redrockbio.com/lakeview-site/

5. Based on your project monitoring plan, **describe the multiparty monitoring process.** (Please limit answer to two pages).

Background

The LSG formed in 1998 to examine the policies tied to the Lakeview Federal Sustained Yield Unit (Unit) and to improve management of the Unit. In 2005, the LSG completed a Long-Range Strategy for the Lakeview Federal Stewardship Unit developed with the assistance of the Forest Service. The Strategy is a common vision and set of goals and objectives developed by the LSG and adopted by the U.S. Forest Service. Originally released in November 2005, the Strategy received an update in 2010 and again in 2011. In 2002, the LSG developed the Biophysical Monitoring Project. The project was designed to answer questions about current conditions and effects of management within the Unit. Hundreds of permanent plot transects were established in areas identified as characteristic of the general landscape. The baseline transects were designed to be used as controls in future studies and as indicators of change. When the Lakeview Stewardship CFLRP was selected for funding in 2012, the LSG developed the Lakeview CFLRP Monitoring Plan that outlines a monitoring strategy for this landscape, while building on the existing monitoring efforts described above that began in 2002.

Hiring of Data Analyst

In 2018, Lake County Resources Initiative (LCRI) hired a data analyst to focus on storage of data, analysis of data, and writing of a Lakeview Stewardship Project CFLR Interim Monitoring Report to be completed in 2021. In 2020, the data analyst drafted a report that addresses the ecological monitoring questions laid out in the LSG Monitoring Plan. Some questions have required analysis with the data collected by the monitoring crew and other questions involved compiling data collected by the Forest Service. The report is nearly complete pending final edits and formatting and includes conclusions and recommendations for management actions and future monitoring needs. The data analyst, monitoring crew, and Forest Service Data Resource Management GIS Specialist have also developed a web app to share the monitoring data. This web app consists of an ESRI story map, background information on the LSG and monitoring crew, and protocols and data (both spatial and tabular) available for download. The report and web app will be available for the public in 2021.

2020 Field Season

The Biophysical Monitoring Team (CBMT) is a student crew comprised of 12 members, of which 5 had been on the crew for 5+ years. During the field season 64 new sites were established: 34 FireMon sites, 9 aspen sites, 8 slash pile burn sites, and 13 soil condition class sites comprised of 210 sample locations. In addition, 36 sites were revisited: 20 post burn and 16 post-harvest sites in the North Warners and Deuce Pilot Projects.

The following monitoring goals were set in the spring by the CBMT Advisory Committee:

1. Thomas Creek - pre harvest monitoring of the Cottonwood Timber Sale
2. Deuce - effects of steep slope logging and subsequent burning on soils
3. Crooked Mud Honey
    - Post-harvest surveys
    - Prescribed burn monitoring following timber harvest
    - Effects of burning slash piles on soils
    - Regenerating ponderosa pine seedlings, invasive weeds (especially ventenata grass), and damage from needle miners
    - New aspen sites along Honey Creek
4. Watson Fire - establishing new aspen monitoring sites in the Upper Chewaucan
5. Jakabe - establishing new FireMon sites to investigate the relationship between beetle killed stands, fire severity, and recovery characteristics of these severely burned (100% mortality) sites
6. Low water surveys of major creeks in the Chewaucan and Goose Lake Basins

Deuce Pilot Prescribed Fire: The Deuce Pilot project, adjacent to the Gearhart Wilderness, was the area chosen to demonstrate steep slope logging with a tethered forwarder harvester and the impact on forest soils. The area was harvested 5 years ago and burned 2 years ago. The prescribed burn occurred with snow on the ground, however the fuel load created high intense flames (20 ft scorch on trees was common) that killed around 2/3 of all the trees, including the large over-story ponderosa pine. Monitoring results of the upper slopes revealed that 83% of the slope burned resulting in 67% mortality and 20ft scorch marks on trees. However, only 16.5% of the soils (sandy loams) were severely burned, while 42% burned moderately, 20 % burned lightly and 4% had no burn. Compaction was also low (<200psi) at all soil depths for 90% of the sites tested.

Crooked Mud Honey Post Burn Soil Characteristics of Large Slash Piles: The harvest resulted in abundant, large slash piles and many were burned last year. Compaction at 4-6 inches was normal at the perimeter of the unburned sites (100-140 psi), but slightly higher at 15ft and 30ft varying from 150 – 300psi. After burning all of these values decreased, an average of 12%; values similar to those in the forest after harvest.

Crooked Mud Honey Aspen Restoration: Six aspen sites along Honey Creek were established and monitored for sucker release following conifer removal. These sites fill in location gaps in the aspen study. These sites had an average of 17% conifer, 25% white fir and 75% ponderosa pine removed for the purpose of releasing aspen suckering. Average diameter of the trees removed were 12" for ponderosa pine and 14" for white fir. Nodes on suckers can be counted to tell their age. Before the conifers were removed, yearly recruitment for the previous 6 years varied from 18 to 154 with the average being around 90. In the year following conifer removal suckering increased to 1,300. In the following year it had dropped back down to around 80. Other aspen sites across the Lakeview CFLR Project have revealed a similar pattern - a high rate of suckering in the first year following removal of conifers and a return to the previous rate in the following years. A year following conifer removal data suggests a 75% increase in herbs and 10% increase in grasses while shrub densities remain the same.

Watson Fire Aspen Recovery: The purpose of this study was to get an idea of how aspen stands destroyed by the Watson Fire are recovering. Three aspen sites were established, and these sites burned high severity leaving no living overstory and few if any saplings or trees. Suckers in the burned soils were abundant, varying from 600 to 1,200 suckers per 1/10-acre site. 1/10 of them were suckering around aspen tree snags and 20% of them were suckering around burned aspen sapling snags. Most of these snags had more than 1 sucker associated with them. Around 8% of the suckers were individual and not associated with any dead stems. There were about three times as many suckers that came up in the year after the fire than in the following year. In aspen stands where conifers were removed, the data suggests similar suckering in the first year, which drops to the normal levels of suckering (5%) before conifer removal in the second year. In aspen stands that burned high severity, the suckering continues to be fairly high (25%) in the second year according to this year's data.

White-Headed Woodpecker Monitoring: This indicator has been addressed annually by personnel at the Rocky Mountain Research Station (RMRS). The 2019 report (most recent) reports the following:

- WHWO detections have increased each year since 2016.
- Nest detections in 2019 decreased from 2018 and are similar to the nest detection numbers from 2015-2017.
- Nests were generally found in large-diameter ponderosa pine and aspen.
- Nests have been found primarily in low-density ponderosa pine forest or aspen stands adjacent to pine forest.
- In 2019, there were 32 WHWO detections on control transects, and 8 WHWO detections on treatment transects.
- In 2019, there were 8 nests detected on control transects, and 1 nest detected on treatment transects. 5 nests succeeded and 4 nests failed.
- Detection surveys were conducted on 14 treatment transects and 13 control transects in 2019.

6. FY 2020 Agency performance measure accomplishments:

Performance Measure	Unit of measure	Total Units Accomplished	Total Treatment Cost ($) *(Contract Costs)*[4]
Acres of forest vegetation improved FOR-VEG-IMP	Acres	1,797	~$693,475
Manage noxious weeds and invasive plants INVPLT-NXWD-FED-AC	Acre	710.5	~$114,074
Miles of stream habitat restored or enhanced HBT-ENH-STRM	Miles	4.55	$0
Acres of terrestrial habitat restored or enhanced HBT-ENH-TERR	Acres	4,329	~$111,863 FS $15,000 Partner
Acres of rangeland vegetation improved RG-VEG-IMP	Acres	615	unknown
Number of stream crossings constructed or reconstructed to provide for aquatic organism passage STRM-CROS-MTG-STD	Number	1*	~$286,855
Miles of system trail maintained to standard TL-MAINT-STD	Miles	33.9	~$32,947
Miles of property line marked/maintained to standard LND-BL-MRK-MAINT	Miles	32.75*	~$268,749
Acres of forestlands treated using timber sales TMBR-SALES-TRT-AC	Acres	1,080	$0
Volume of timber sold TMBR-VOL-SLD	CCF	1,633.84**	$0
Acres of hazardous fuels treated outside the wildland/urban interface (WUI) to reduce the risk of catastrophic wildland fire FP-FUELS-NON-WUI	Acre	4,574	$0
Acres of wildland/urban interface (WUI) high priority hazardous fuels treated to reduce the risk of catastrophic wildland fire FP-FUELS-WUI	Acres	3,653	$0
Please also include the acres of prescribed fire accomplished	Acres	3,030	$0

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

* Not entered in the database of record but accomplished with CFLN funding.

** There was a mistake in the reporting, so the actual accomplishment is less then what is reported in the Database of Record.

7. **FY 2020 accomplishment narrative** – Summarize key accomplishments and evaluate project progress *not already described elsewhere* in this report. What impact, if any, has Shared Stewardship in your region had on your CFLRP work? (This could be from a Shared Stewardship MOU or the general emphasis in your region on working cross-boundary on shared priorities at the scale needed to have your desired impact). (Please limit answer to two pages).

Klamath and Lake Counties Shared Stewardship MOU: In August of 2020, the KLFHP completed a local *Klamath and Lake Counties Shared Stewardship Memorandum of Understanding* that identifies how the KLFHP is putting shared stewardship into practice in Klamath and Lake Counties. Twenty-two partners signed this MOU. This county-level MOU tiers to the objectives identified in the state-level MOU between the USFS and Oregon Department of Forestry (ODF) signed August 13, 2019. https://www.fs.usda.gov/sites/default/files/Oregon-Shared-Stewardship-Agreement.pdf

North Warner Aspen, Meadow, and Shrub-steppe Restoration: The objectives of the North Warner Aspen Meadow Project were to remove encroaching conifer from aspen, meadow, and shrub steppe habitats within the Crooked Mud Honey Project Area, including the Inventoried Roadless Area (IRA). Treatments included cutting all conifer up to 12 inches and all juniper up to 21 inches within and around aspen and meadow habitats, and all juniper up to 21 inches within shrub-steppe habitat in the IRA. All cut material up to eight inches outside the IRA was hand piled. In FY20, 41

[4] Please include the costs associated with a contract to complete acres reported, if this level of detail is available, including partner funds

acres of aspen and 234 acres of meadow were treated for a total of 275 acres. Between 2016 and 2020, 2,852 acres of aspen, meadow and shrub steppe have been treated within the project area. Over eight weeks, Northwest Youth Corps (NYC) also completed approximately *25* acres of aspen restoration using an adult (19-26 years old) saw crew of approximately 3-5 members with a crew leader. Northwest Youth Corps offers a challenging education and job-training experience that helps youth and young adults from diverse backgrounds develop the skills they need to lead full and productive lives.

Invasives: The Forest Service works collaboratively with the Lake County Cooperative Weed Management Area (LCCWMA) on existing projects, which in addition to invasive weed management on NFS land, includes adjacent private landowners within the CFLR unit. Inventorying and treating new populations before they become well established is the most effective means for controlling invasive plants and preventing spread. The project goals and objectives are suppression, or when possible, eradication of known invasive plant populations, surveying for new invasive plant sites, and restoring treated areas. Currently, a large portion of invasive plant treatments occur along major access roads into the forest. The additional funds provided through CFLRP allow continued treatment of existing sites and initiated treatments on other inventoried or new sites. In 2020, 657.3 acres were treated on National Forest System lands with CFLR funds. These acres were treated with a combination of manual control (251.7 acres, 304 sites) and herbicide treatments (405.6 acres, 383 sites). With the addition of the USFS matching funds, another 247 acres were treated manually (170 sites). Using all funding sources within the CFLR Project Area, an additional 530 sites were found to be inactive (92.9 acres), 70 sites were eradicated (27.6 acres), and 64 sites have been inactive long enough that a revisit this season was not needed (7.7 acres). Overall, 904.3 acres were treated and an additional 128.2 acres (664 sites) were accounted for within the CFLR Project Area.

Thomas Creek and North Warner Commercial and Non-Commercial Tree Thinning: Commercial harvest (0.799 MBF) and non-commercial thinning (1,321 acres) with hand piling, is a key component to reducing stocking levels, reducing ladder fuels, and setting the stage for prescribed fire. Treatments are designed to set stands on a trajectory towards the historic range of variability, undoing the effects of more than a century of successful fire suppression and improving forest resiliency to future natural disturbance such as fire, insect and disease, and drought. In addition, these activities provide valuable economic benefits to the local communities, in the form of jobs both in the forest and at the Collins Pine Mill in Lakeview. This commercial and non-commercial thinning are adjacent to private ownership to help reduce spread potential and risk of wildfire movement from public to private land.

Fire/Fuels: Prescribed fire (3,030) and pile burning (3,363 acres) were completed in the West Drews, South Warner Aspen, Crooked Mud Honey, and Jakabe Project areas. The number of acres treated by prescribed fire during FY20 was reduced because of the suspension of prescribed fire activities in Region 6 during the spring due to COVID 19 mitigation measures and potential smoke impacts to communities and populations at risk. The objectives were primarily to reduce the existing wildland fire hazard and the potential negative effects from future wildland fire to both agency and adjacent private lands, while restoring fire-adaptive ecosystems and improving the health of the forest. A burn prescription was used that allowed for a mosaic pattern. A combination of burned and unburned areas is the best mix to restore health, vigor, and structure into the vegetative communities. The goal of the Lakeview Stewardship Unit is to return fire to the role it historically filled and thus return sustainability to the forested lands. Treatment by prescribed burning will reduce fuel loadings and break up vertical and horizontal continuity of fuels within stands across the landscape. This will produce conditions where wildfires will have fewer damaging effects and can be more readily controlled.

Recreation/Trails: Two youth crews consisting of four leaders and 18 crew members maintained 8 miles of the Lakes Loop Trail 140 and 3 miles of the Dead Horse Rim Trail 139 between June 28 and July 10. Work performed included clearing brush, removing downed trees, restoring tread, and performing general trail maintenance. One Youth Conservation Corps crew was also hosted on the Fremont-Winema National Forest from June 15 to August 7 on the Lakeview Ranger District. The crew consisted of one crew leader and four crew members. Tasks performed by these crews included: (1) conducting timber plot surveys, (2) replacing signage, (3) repairing fences, (4) restoring trails, and (5) maintaining recreation sites. Crew members benefit from this work by developing career enhancing knowledge and skills. Tasks performed involve physical activity that promotes healthy living and inspires pursuit of outdoor recreational

activities. Projects completed teach crew members about nature, promote an awareness of the value of public lands, and may generate interest in a future career with a natural resource agency or other land management organization.

Property Lines: CFLN funds were used to award 5 Cadastral Surveying contracts with 4 different private land surveying firms. The work involved is in the South Warner and Thomas Creek Project Areas, in support of future timber sales and other restoration work. The awarded contracts accomplish 32.75 miles of boundary management and related land survey monuments maintained. The boundary is cleared of vegetation, signed, posted, blazed, and painted so they are easily identified in the field. The land survey corner monuments are maintained with signs so they will be protected.

Fish Habitat Restoration: Fish habitat was restored on Burnt Creek, Willow Creek, and Deer Creek with CFLN funding. The Deer Creek project removed a small culvert that was blocking habitat for redband trout and bull trout, and replaced it with a larger, open bottom crossing that allowed for passage of fish and other aquatic organisms. The project on Willow Creek focused on adding large wood material to the stream to create cover and points of scour for the creation of pools. Due to the terrain which made it difficult for the use of an excavator, the project was implemented using the Lakeview Ranger District fire crew. The crew felled identified trees into the stream as single pieces or as multiple pieces to create a log jam type complex. The project on Burnt Creek had two components which focused on adding large wood material to the stream to create cover and points of scour as well as streambank stabilization/riparian restoration. An excavator was used to place large wood material into Burnt Creek to create cover and points of scour for pool creation. These constructed log jams were typically created on stream meander bends and provide stream channel stability, a complexity of stream habitats, cover for fish, and accelerate pool formation. Streambank stabilization involved recontouring actively eroding streambanks and creation of floodplain terraces, matching stable streambank contours upstream and downstream of the eroding area. This allows for high stream flows to better access the floodplain which will decrease the rivers ability to erode these areas. Sedge/sod mats were used on newly recontoured streambanks to accelerate revegetation.

Road Maintenance: This contract supplied, delivered, and stockpiled chip rock for future use in chip sealing as Phase I of the Crooked Mud Honey Project. This road, a two-layer chip seal paved road providing the only access up into the North Warner Mountain Range, was subjected to extensive timber haul during the ten-year Lil Stewardship sale. The pavement has numerous sections that became broken up and/or badly potholed, especially on the steep four-mile section from State Highway 140 north to Mill Creek Trailhead. The project will replace sections of the damaged chip seal with new chip seal. The next phase will be in 2021 and will either complete all the work, or if funds are limited, the damaged areas will be ground up in 2021, with the new chip seal put down in 2022. Road Maintenance Deposits from the stewardship project will contribute a large part of the funding for the future phases.

8. The WO (EDW) will use spatial data provided in the databases of record to **estimate a treatment footprint** for your review and verification. This information will be posted here on the internal SharePoint site for verification *after the databases of record close October 31*.

Fiscal Year	Footprint of Acres Treated (without counting an acre of treatment on the land in more than one treatment category)
FY 2020	16,837 acres
Estimated Cumulative Footprint of Acres (2010 or 2012 through 2020)	FY12 – 17,166 acres FY13 -- 6,378 acres FY14 – 20,523 acres FY15 – 15,076 acres FY16 – 12,143 acres FY17 – 20,632 acres FY18 - 29,654 acres FY19 – 24,801 acres

9. **Describe any reasons that the FY 2020 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 number of acres treated by prescribed fire during FY20 was reduced because of the suspension of prescribed fire activities in Region 6 during the spring due to COVID 19 mitigation measures and potential smoke impacts to communities and populations at risk.

10. Planned FY 2021 Accomplishments

Performance Measure Code	**Unit of measure**	**Planned Accomplishment for 2021** (National Forest System)	***Planned Accomplishment on non-NFS lands within the CFLRP landscape***[5]
Acres of forest vegetation established FOR-VEG-EST	Acres	NA	NA
Manage noxious weeds and invasive plants INVPLT-NXWD-FED-AC	Acre	600 acres	200 acres
Miles of stream habitat restored or enhanced HBT-ENH-STRM	Miles	5 miles	NA
Acres of terrestrial habitat restored or enhanced HBT-ENH-TERR	Acres	250 acres	50 acres
Miles of road decommissioned RD-DECOM	Miles	5 miles	NA
Miles of passenger car system roads improved RD-PC-IMP	Miles	4 miles	NA
Miles of high clearance system road improved RD-HC-IMP	Miles	NA	NA
Volume of timber sold TMBR-VOL-SLD	CCF	23,846	NA
Green tons from small diameter and low value trees removed from NFS lands and made available for bio-energy production BIO-NRG	Green tons	NA	NA
Acres of hazardous fuels treated outside the wildland/urban interface (WUI) to reduce the risk of catastrophic wildland fire FP-FUELS-NON-WUI	Acre	2,500 acres	500 acres
Acres of wildland/urban interface (WUI) high priority hazardous fuels treated to reduce the risk of catastrophic wildland fire FP-FUELS-WUI	Acres	5,000 acres	500 acres

Please include all relevant planned accomplishments, assuming that funding specified in the CFLRP project proposal for FY 2020 is available.

[5] As we shift to more emphasis on sharing results across all lands within the CFLRP projects – 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. Give your best estimate at this point; if it's unknown how much work will occur off NFS lands, simply state unknown.

11. **Planned accomplishment narrative and justification if planned FY 2021 accomplishments and/or funding differs from CFLRP project work plan** (no more than 1 page):

Any additional important accomplishments not covered in the FY21 table above, but will yield long-term results if funded, include ecological, social, and economic monitoring completed by Lake County Resources Initiative and the University of Oregon.

12. **Please include an up to date list of the members of your collaborative if it has changed from previous years**. If the information is available online, you can simply include the hyperlink here.

Earlier this year, the KLFHP merged with the LSG and formed a subcommittee to focus on collaboration with the Fremont-Winema National Forest. For the past 20 years, the LSG has successfully collaborated with the Fremont-Winema on active restoration of the 500,000-acre Lakeview Federal Stewardship Unit. By merging with the KLFHP, this award-winning collaboration will now expand to promote restoration across the entire 2.3 million-acre national forest. Likewise, the Lakeview collaborative's Chewaucan Biophysical Monitoring Team will become part of the KLFHP with a goal of expanding its exceptional work to monitor additional sites in the Fremont-Winema National Forest.

Nick Johnson - LCRI	Barry Imler – Fremont-Winema NF	Brad Winters – Lake Co. Commissioner
Clair Thomas – LCRI Monitoring	Mike Ramsey – Fremont-Winema NF	Mark Albertson – Lake Co. Commissioner
Julia Olszewski – LCRI Monitoring	Chuck Burley – Fremont-Winema NF	Amy Amrhein – Sen. Merkley' s Office
Craig Bienz - TNC	Amy Markus – Fremont-Winema NF	Rebecca Wolfe – Private citizen
Dustin Gustaveson - ODF	Jim Walls – Private Citizen	Mike Anderson – The Wilderness Society
Kasey Johnson - ODF	Daniel Leavell– OSU Extension	Jeff Manternach – Red Rock Biofuels
Jason Pettigrew – ODF	Jess Spradley – Collins Pine	Autumn Ellison – University of Oregon
Ginger Casto - SCOEDD	Doug Heiken – Oregon Wild	Dylan Kruse – Sustainable Northwest
Emily Jane Davis - OSU	Eric White – PNW Research Station	

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.

NA

Signatures:

Recommended by (Project Coordinator(s)): AMY MARKUS Digitally signed by AMY MARKUS Date: 2020.12.14 11:16:20 -08'00'

Amy Markus, Cohesive Strategy Coordinator

Approved by (Forest Supervisor(s)): BARRY IMLER Digitally signed by BARRY IMLER Date: 2020.12.14 10:48:15 -08'00'

Barry Imler, Forest Supervisor

Draft reviewed by (collaborative chair or representative): Nicholas Johnson

Nick Johnson, Lake County Resources Initiative

Appendix A FTEM Reports

Treatment Name	Agency	Treatment Type	Treatment Completion Date	Treatment and wildfire interaction details*	*Treatment Acres Burned by Wildfire	*Date Wildfire Interacted with Treatment	*Fire Behavior Change?	*Treatment Contribute to Control/ Management?	*Treatment Strategically Located?	Comments
Brattain Fire										
COMB #8	USFS	Lop and Scatter	Nov 03, 2015	Wildfire burned through some acres treated	5.67	Sept 12, 2020	Yes	yes	no	
LAUNCH UNIT 8	USFS	Machine Pile Burn	Nov 13, 2014	Wildfire burned through some acres treated	78.83	Sept 16, 2020	Yes	yes	no	Kept the fire from getting established in the crowns of the trees.
DRILL IRSC UNIT 42	USFS	Biomass Removal	Sept 21, 2015	Wildfire burned through some acres treated	7.08	Sept 11, 2020	Yes	yes	no	Lowering fire behavior
LAUNCH UNIT 11	USFS	Machine Pile Burn	Dec 09, 2014	Wildfire burned through some acres treated	5	Sept 15, 2020	Yes	yes	no	Lowering fire behavior
LAUNCH UNIT 1	USFS	Machine Pile Burn	Jan 10, 2014	Wildfire burned through all acres treated	260.22	Sept 15, 2020	Yes	yes	no	Lowering fire behavior

DRILL IRSC UNIT 47	USFS	Thinning	Oct 20, 2015	Wildfire burned through some acres treated	0.73	Sept 11, 2020	Yes	yes	no	
DRILL IRSC UNIT 45	USFS	Biomass Removal	Sept 21, 2015	Wildfire burned through all acres treated	5.59	Sept 13, 2020	No	no	no	
LAUNCH UNIT 10	USFS	Machine Pile Burn	Nov 12, 2014	Wildfire burned through some acres treated	4.54	Sept 15, 2020	Yes	yes	no	Lowering fire behavior
DRILL IRSC UNIT 61	USFS	Thinning	Oct 20, 2015	Wildfire burned through all acres treated	6.76	Sept 11, 2020	Yes	yes	no	Lowering fire behavior
LAUNCH UNIT 9	USFS	Machine Pile Burn	Nov 12, 2014	Wildfire burned through some acres treated	3.21	Sept 14, 2020	Yes	yes	no	Lowering fire behavior
JAKABE RX UNDERBURN UNIT 11	USFS	Broadcast Burn	April 21, 2014	Wildfire burned through some acres treated	333	Sept 13, 2020	Yes	yes	yes	Slowed fire spread and reduced mortality
MARSTER 1A	USFS	Machine Pile	July 31, 2015	Wildfire burned through some acres treated	241.23	Sept 11, 2020	Yes	yes	no	Treatment helped hold fire along the river for a few days

LAUNCH 62	USFS	Machine Pile	July 12, 2014	Wildfire burned through all acres treated	104	Sept 14, 2020	Yes	yes	no	Lowering fire behavior
LAUNCH 58	USFS	Machine Pile Burn	Dec 09, 2014	Wildfire burned through some acres treated	32.5	Sept 17, 2020	Yes	yes	no	Treatment was used to control backfire operations.
LA UNIT 24	USFS	Machine Pile	Aug 27, 2015	Wildfire burned through some acres treated	72	Sept 16, 2020	Yes	yes	no	Removing fuels by burning piles helped reduce the fuel load in this unit, back burning was used within this unit.
LAUNCH UNIT 5	USFS	Machine Pile Burn	Jan 10, 2014	Wildfire burned through some acres treated	50	Sept 15, 2020	Yes	yes	no	Lowering fire behavior
LAUNCH 57	USFS	Machine Pile	June 25, 2014	Wildfire burned through some acres treated	251.53	Sept 14, 2020	Yes	yes	no	Lowering fire behavior
DRILL IRSC UNIT 60	USFS	Thinning	Oct 20, 2015	Wildfire burned through some acres treated	30.54	Sept 13, 2020	Yes	yes	no	Lowering fire behavior

DRILL IRSC UNIT 62	USFS	Thinning	Oct 20, 2015	Wildfire burned through some acres treated	77.73	Sept 12, 2020	Yes	yes	yes	Lowering fire behavior
LAUNCH UNIT 3	USFS	Machine Pile Burn	Dec 09, 2014	Wildfire burned through all acres treated	108	Sept 15, 2020	Yes	yes	no	Lowering fire behavior
LAUNCH UNIT 4	USFS	Machine Pile Burn	Nov 12, 2014	Wildfire burned through some acres treated	86.94	Sept 15, 2020	Yes	yes	no	Lowering fire behavior
LAUNCH 61	USFS	Machine Pile Burn	Dec 04, 2014	Wildfire burned through all acres treated	65.42	Sept 15, 2020	Yes	yes	no	Lowering fire behavior
LAUNCH UNIT 2	USFS	Lop and Scatter	Aug 13, 2012	Wildfire burned through some acres treated	127	Sept 14, 2020	Yes	yes	no	Rearrangement of fuels did help slow fire spread, but made mop up and patrolling more complex
Chewaucan	BLM	Jackpot Burn	March 16, 2007	Treatment was used primarily for suppression actions		Sept 15, 2020	Yes	yes	yes	Faster and easier burnout for a cleaner black and less fire intensity directly on control lines.

BalBeach South	BLM	Jackpot Burn	April 01, 2008	Treatment was used primarily for suppression actions		Sept 15, 2020	Yes	yes	yes	Faster and easier burnout for a cleaner black and less fire intensity directly on control lines.
Chewaucan North 01	BLM	Hand Pile Burn	March 30, 2005	Treatment was used primarily for suppression actions		Sept 15, 2020	Yes	yes	yes	Faster and easier burnout for a cleaner black and less fire intensity directly on control lines.
Chewaucan NW 01 thin	BLM	Thinning	Oct 06, 2005	Treatment was used primarily for suppression actions		Sept 15, 2020	Yes	yes	yes	Faster and easier burnout for a cleaner black and less fire intensity directly on control lines.
Chewaucan NW Jackpot	BLM	Jackpot Burn	March 16, 2007	Treatment was used primarily for suppression actions	300	Sept 15, 2020	Yes	yes	yes	Faster and easier burnout for a cleaner black and less fire intensity directly on control lines.
MARSTER 1	USFS	Machine Pile Burn	Jan 01, 2018	Wildfire burned through all acres treated	291	Sept 15, 2020	Yes	yes	no	The burning of piled fuel helped reduce the fuel loading in the units thus reducing fire behavior

DRILL IRSC UNIT 61	USFS	Machine Pile Burn	Nov 15, 2017	Wildfire burned through all acres treated	6.76	Sept 15, 2020	Yes	yes	no	Lowering fire behavior
DRILL IRSC UNIT 47	USFS	Machine Pile Burn	Jan 04, 2018	Wildfire burned through some acres treated	0.76	Sept 15, 2020	Yes	yes	no	Lowering fire behavior
DRILL IRSC UNIT 45	USFS	Machine Pile Burn	Jan 04, 2018	Wildfire burned through all acres treated	5.59	Sept 15, 2020	Yes	yes	no	Lowering fire behavior
DRILL IRSC UNIT 62	USFS	Machine Pile Burn	Nov 15, 2017	Wildfire burned through some acres treated	77.73	Sept 15, 2020	Yes	yes	no	Lowering fire behavior
DRILL IRSC UNIT 42	USFS	Machine Pile Burn	Jan 04, 2018	Wildfire burned through some acres treated	7.14	Sept 15, 2020	Yes	yes	no	Lowering fire behavior
COMB #8	USFS	Machine Pile Burn	Jan 01, 2018	Wildfire burned through some acres treated	5.74	Sept 15, 2020	Yes	yes	no	Lowering fire behavior
DRILL IRSC UNIT 42	USFS	Thinning	Sept 21, 2015	Wildfire burned through some acres treated	7.14	Sept 12, 2020	Yes	yes	yes	Lowering fire behavior

LAUNCH UNIT 9	USFS	Lop and Scatter	Aug 13, 2012	Wildfire burned through some acres treated	3.21	Sept 14, 2020	Yes	yes	no	Rearrangement of fuels did help slow fire spread, but made mop up and patrolling more complex
COMB #8	USFS	Machine Pile	Nov 03, 2015	Wildfire burned through some acres treated	5.74	Sept 11, 2020	Yes	yes	no	Lowering fire behavior
LAUNCH UNIT 4	USFS	Lop and Scatter	May 31, 2013	Wildfire burned through some acres treated	86.94	Sept 14, 2020	Yes	yes	no	Rearrangement of fuels did help slow fire spread, but made mop up and patrolling more complex
DRILL IRSC UNIT 61	USFS	Biomass Removal	Oct 19, 2015	Wildfire burned through all acres treated	6.76	Sept 13, 2020	No	no	no	
LAUNCH UNIT 10	USFS	Thinning	Aug 13, 2012	Wildfire burned through all acres treated	4.54	Sept 17, 2020	Yes	no	no	Thinning then piling and burning fuel helped reduce flame lengths.
LAUNCH UNIT 2	USFS	Machine Pile	Aug 13, 2012	Wildfire burned through all acres treated	127	Sept 17, 2020	Yes	no	no	piling of fuels and then burned helped remove fuel which reduced flame lengths.

LAUNCH UNIT 1	USFS	Lop and Scatter	May 31, 2013	Wildfire burned through all acres treated	260	Sept 17, 2020	Yes	no	no	Rearrangement of fuels helped reduce flame lengths but made mop-up and holding more complex
DRILL IRSC UNIT 60	USFS	Machine Pile Burn	Nov 15, 2017	Wildfire burned through some acres treated	30.54	Sept 16, 2020	Yes	yes	no	Treatment helped contain fires edge through this unit
MARSTER 1A	USFS	Thinning	July 31, 2015	Wildfire burned through some acres treated	241.77	Sept 13, 2020	Yes	yes	no	Treatment helped hold the fire along the river for a few days
LAUNCH UNIT 2	USFS	Lop and Scatter	Sept 06, 2011	Wildfire burned through all acres treated	97	Sept 17, 2020	Yes	no	no	Treatment reduced the flame lengths within this unit.
DRILL IRSC UNIT 47	USFS	Biomass Removal	Sept 21, 2015	Wildfire burned through some acres treated	0.76	Sept 16, 2020	Yes	yes	no	Treatment was used to help slow spread of a slop over allowing crews to catch this slop
LAUNCH UNIT 3	USFS	Thinning	May 31, 2013	Wildfire burned through all acres treated	108	Sept 17, 2020	Yes	no	no	Thinning of fuels reduced flame lengths

DRILL IRSC UNIT 42	USFS	Machine Pile	Sept 21, 2015	Wildfire spotted into treatment	7.14	Sept 11, 2020	Yes	yes	no	Treatment helped firefighters use direct tactics on a slop over
DRILL IRSC UNIT 62	USFS	Biomass Removal	Oct 19, 2015	Wildfire burned through some acres treated	77.73	Sept 16, 2020	Yes	yes	no	Treatment helped crews use direct attack
LAUNCH 62	USFS	Thinning	July 12, 2014	Wildfire burned through all acres treated	104	Sept 17, 2020	Yes	no	no	Thinning of fuels reduced flame lengths
LAUNCH 57	USFS	Thinning	June 25, 2014	Wildfire burned through some acres treated	251.53	Sept 16, 2020	Yes	yes	no	Kept the fire from getting established in the crowns of the trees.
LAUNCH UNIT 9	USFS	Thinning	Aug 13, 2012	Wildfire burned through some acres treated	3.21	Sept 16, 2020	Yes	yes	no	Kept the fire from getting established in the crowns of the trees.
LAUNCH 61	USFS	Thinning	July 12, 2014	Wildfire burned through all acres treated	65.42	Sept 17, 2020	Yes	no	no	Rearrangement of fuels helped lower flame lengths
LAUNCH UNIT 1	USFS	Machine Pile	May 31, 2013	Wildfire burned through all acres treated	260	Sept 17, 2020	Yes	no	no	Timber sale unit, treatment helped slow fire spread. it helped keep fire ground level.

DEUCE WATSON UNDERBURN 01	USFS	Fire Use	Nov 27, 2018	Wildfire burned through some acres treated	264.3	Sept 12, 2020	Yes	yes	no	Fire sloped over into this RX unit, having this unit treated allowed firefighters quickly catch this slop over.
LA UNIT 24	USFS	Biomass Removal	Aug 27, 2015	Wildfire burned through some acres treated	72	Sept 16, 2020	Yes	yes	no	Kept the fire from getting established in the crowns of the trees.
DEUCE UNDERBURN 09	USFS	Broadcast Burn	Oct 31, 2017	Other	1.27	Sept 11, 2020	The fire did not enter the treatment	yes	yes	Having a treated unit across the road helped reduce spotting from main fire
MARSTER 1A	USFS	Machine Pile Burn	Dec 21, 2017	Wildfire burned through some acres treated	241.77	Sept 13, 2020	Yes	yes	no	Treatment helped hold the fire for a few days along the river.
LA UNIT 24	USFS	Machine Pile Burn	Nov 27, 2017	Wildfire burned through some acres treated	72	Sept 16, 2020	Yes	yes	no	Kept the fire from getting established in the crowns of the trees.
Crane Fire										
BURNT WILLOW PCT E	USFS	Lop and Scatter	Oct 29, 2013	Wildfire burned through all acres treated	14.62	Aug 17, 2020	Yes	yes	no	BURNT WILLOW PCT E

BURNT WILLOW IRTC V1	USFS	Machine Pile Burn	Jan 15, 2015	Wildfire burned through all acres treated	11.5	Aug 17, 2020	Yes	yes	no	BURNT WILLOW IRTC V1
BURNT WILLOW IRTC V3	USFS	Machine Pile Burn	Jan 15, 2015	Wildfire burned through all acres treated	19	Aug 17, 2020	Yes	yes	no	BURNT WILLOW IRTC V3
BURNT WILLOW IRTC V4	USFS	Machine Pile Burn	Jan 15, 2015	Wildfire burned through all acres treated	4.21	Aug 17, 2020	Yes	yes	no	BURNT WILLOW IRTC V4
BURNT WILLOW IRTC V2	USFS	Machine Pile Burn	Jan 15, 2015	Wildfire burned through all acres treated	25.25	Aug 17, 2020	Yes	yes	no	BURNT WILLOW IRTC V2
BURNT WILLOW PCT F	USFS	Lop and Scatter	Oct 29, 2013	Wildfire burned through all acres treated	4.17	Aug 17, 2020	Yes	yes	no	BURNT WILLOW PCT F
BURNT WILLOW IRTC V4	USFS	Biomass Removal	Jan 12, 2011	Wildfire burned through all acres treated	4.21	Aug 17, 2020	Yes	yes	no	BURNT WILLOW IRTC V4
BURNT WILLOW IRTC V1	USFS	Machine Pile	Nov 16, 2010	Wildfire burned through all acres treated	11.5	Aug 17, 2020	Yes	yes	no	BURNT WILLOW IRTC V1

BURNT WILLOW IRTC V3	USFS	Thinning	Nov 16, 2010	Wildfire burned through all acres treated	19	Aug 17, 2020	Yes	yes	no	BURNT WILLOW IRTC V3
BURNT WILLOW IRTC V2	USFS	Thinning	Sept 01, 2011	Wildfire burned through all acres treated	25.25	Aug 17, 2020	Yes	yes	no	BURNT WILLOW IRTC V2
BURNT WILLOW IRTC V3	USFS	Biomass Removal	Nov 16, 2010	Wildfire burned through all acres treated	19	Aug 17, 2020	Yes	yes	no	BURNT WILLOW IRTC V3
BURNT WILLOW IRTC V2	USFS	Machine Pile	Sept 01, 2011	Wildfire burned through all acres treated	25.25	Aug 17, 2020	Yes	yes	no	BURNT WILLOW IRTC V2
BURNT WILLOW IRTC V4	USFS	Machine Pile	Jan 12, 2011	Wildfire burned through some acres treated	4.21	Aug 17, 2020	Yes	yes	no	BURNT WILLOW IRTC V4
SWAR 2015 UNIT SWA 1041	USFS	Machine Pile	Oct 12, 2015	Wildfire burned through some acres treated	2.05	Aug 17, 2020	Yes	yes	no	SWAR 2015 UNIT SWA 1041
SWAR 2015 UNIT SWA 2014	USFS	Machine Pile	Oct 12, 2015	Wildfire burned through some acres treated	7.25	Aug 17, 2020	Yes	yes	no	SWAR 2015 UNIT SWA 2014

SWAR 2015 UNIT SWA 30	USFS	Broadcast Burn	Oct 03, 2019	Wildfire burned through some acres treated	78.8	Aug 17, 2020	Yes	yes	no	SWAR 2015 UNIT SWA 30
S WARNER ASPEN MEADOW 1042	USFS	Lop and Scatter	Oct 06, 2014	Wildfire burned through some acres treated	18.79	Aug 17, 2020	Yes	yes	no	S WARNER ASPEN MEADOW 1042
Ben Young										
JOKER II UNIT 8	USFS	Lop and Scatter	June 08, 2007	Treatment was used primarily for suppression actions	23.65	July 22, 2020	Yes	yes	no	Slowed the spread of fire and allowed firefighters to use direct tactics
RIPARIAN 5	USFS	Machine Pile	Aug 03, 2015	Treatment was used primarily for suppression actions	16.92	July 21, 2020	Yes	yes	no	Slowed the spread of fire and allowed firefighters to use direct tactics
RIPARIAN 5	USFS	Machine Pile Burn	Jan 01, 2018	Treatment was used primarily for suppression actions	16.92	July 21, 2020	Yes	yes	no	Slowed the spread of fire and allowed firefighters to use direct tactics