



United States Department of Agriculture

Collaborative Forest Landscape Restoration Program 5-Year Report



COLLABORATIVE FOREST LANDSCAPE RESTORATION PROGRAM: FULFILLING THE PURPOSE OF THE ACT

Deschutes Forest
Collaborative Project, OR
(Ally Steinmetz)



Omnibus Public Land Management Act of 2009, Title IV

The purpose of Title IV is to—

- Encourage collaborative, science-based restoration.
- Support ecological, economic, and social sustainability.
- Leverage local, national, and private resources.
- Facilitate the reduction of wildfire management costs and risks, including through reestablishing natural fire regimes.
- Demonstrate the degree to which various restoration approaches achieve ecological and watershed health objectives.
- Use forest restoration byproducts to offset treatment costs while benefiting local rural economies and improving forest health.

Project Selections

The Collaborative Forest Landscape Restoration (CFLR) Advisory Committee evaluated project proposals and made recommendations to the Secretary of the U.S. Department of Agriculture (USDA) to make selections. The committee evaluated proposals based on criteria outlined in Title IV. The landscape needed to be primarily National Forest System lands in need of restoration and accessible for woody biomass utilization. Project restoration strategies needed to be substantially complete and include reduction of hazardous fuels and maintenance of old growth, as well as not establish permanent roads, among other criteria. The committee also evaluated proposed projects on the strength of collaborative support and their investment and funding plans.

USDA is an equal opportunity provider and employer.

Across the country, tens of millions of acres of forests and watersheds are in need of restoration.

Resilient landscapes provide integral resources and services to ecosystems and communities. From water purification to recreational opportunities, to wildlife and plant diversity, to a sustainable supply of wood products, our Nation relies on our forested land for ecological, social, and economic benefits. Restored landscapes are not only better able to sustain these benefits—the landscapes are also more resilient to stressors, which range from invasive species infestations to drought. Moreover, since 2000, at least 10 States have had their largest fires on record and some States have broken records more than once. To protect forests from uncharacteristic wildfire and make communities safer, fire-adapted landscapes must be restored to reduce wildfire risk and severity.

At the 5-year mark, the CFLR program is on track to meet its 10-year goals. In the past 5 years, the CFLR program learned important lessons, celebrated a range of successes, and identified new opportunities as the program moves into the next 5 years.

Congress authorized the CFLR program in the 2009 Omnibus Public Lands Management Act to accelerate restoration on high-priority landscapes, support much-needed economic stability in rural communities, and reduce the risk and associated costs of catastrophic wildfire. During the 5 years since the initial 10 CFLR projects began implementation, the program has demonstrated that **collaborative, landscape-scale restoration efforts can help achieve a range of integrated outcomes, including¹—**

- **More than 1.45 million acres** treated to reduce the risk of catastrophic fire.
- **More than 84,570 acres** of forest lands treated to achieve healthier condition through timber sales.
- **More than 1.33 million acres** improved for wildlife habitat.
- **More than 73,600 acres** treated for noxious weeds and invasive plants.

These and other CFLR restoration activities have collectively generated more than **1,256 million board feet** of timber volume sold, **\$661 million in local labor income**, and an **average of 4,360 jobs per year**. Moreover, CFLR projects attracted new partners and built community relationships, leveraging more than **\$76.1 million in partner match funds**.

This report describes achievements to date and assesses the extent to which the CFLR program is fulfilling its purposes. It is framed around a set of five national indicators developed by the Forest Service, an agency of the USDA, and collaborative partners—**(1) economic impacts, (2) fire risk and costs, (3) ecological condition, (4) collaboration, and (5) leveraged funds.** (See page 4 for additional background on the indicators.) Although the report is divided into sections based on these indicators, restoration treatments **are closely integrated**. For example, hazardous fuel treatments reduce risk of uncharacteristic wildfire on the landscape and make nearby communities safer, but they also can improve wildlife habitat conditions. Activities and accomplishments should be viewed as part of a larger landscape-scale picture of restoration outcomes.

Additional information is available on the CFLR Web site: <http://www.fs.fed.us/restoration/CFLRP/index.shtml>.

¹ Please see the “Developing National Indicators” section on page 4 for more information on data.

CFLR: FULFILLING THE PURPOSE OF THE ACT

CFLR Projects at a Glance

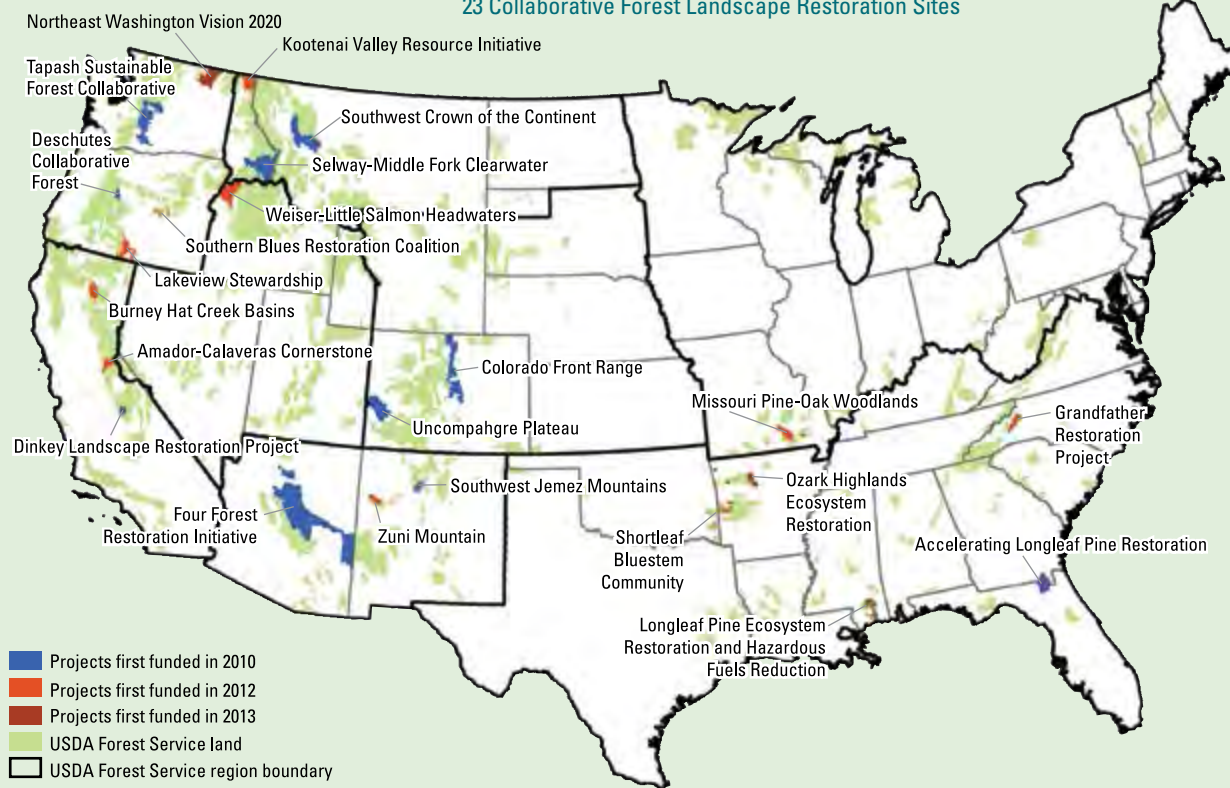
- 10 projects were funded in 2010, 10 in 2012, and 3 in 2013.
- Project landscapes range from 130,000 to 2,400,000 acres.
- Some project collaboratives have been working together for more than a decade; others formed recently.
- Each project's requested lifetime CFLR program funding ranges from under \$5 million to more than \$35 million.
- Landscapes include a range of ecosystems, from high alpine peaks to ponderosa pine forests to grasslands.

Individual project accomplishments reflect differences in landscapes and project priorities.

Program Oversight

The Forest Service coordinates the CFLR program at the local, regional, and national levels to maximize efficiency and promote shared learning. Projects have a designated CFLR coordinator to manage work on the ground with local partners. All Forest Service regions (see map to the left) have a regional CFLR coordinator who facilitates communication among projects within the region and provides support and guidance. The Forest Management director in the National Office in Washington, DC, provides programwide management and oversight. Communication and networking are important aspects of the program and include monthly coordinator calls, site visits, in-person regional workshops, and virtual "peer learning" Webinars. Furthermore, each project submits an annual report to the National Office, outlining the accomplishments and challenges for the year and plans for future work (reports are available on the CFLR Web site). The reporting process provides a mechanism for tracking progress and proactively identifying potential issues. The Forest Service works closely with partners, including the CFLR Coalition² and the National Forest Foundation (NFF) to collect data, convene meetings, and support progress.

23 Collaborative Forest Landscape Restoration Sites



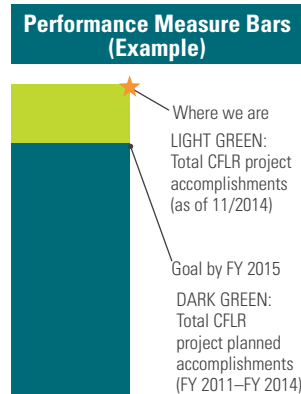
² The CFLR Coalition Steering Committee includes representatives from American Forests, Defenders of Wildlife, Forest Business Network, The Nature Conservancy, Society of American Foresters, Sustainable Northwest, and The Wilderness Society.

CFLR: FULFILLING THE PURPOSE OF THE ACT

How To Read This Report

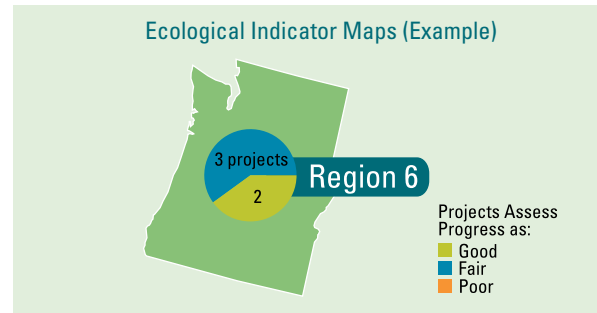
Performance Measure Bars: For most of the CFLR performance measures, projects have met or exceeded planned performance targets. We expect that **more accomplishments will be achieved in the second half of the program than in the first**, as projects ramp up implementation after initial planning, organizing, and responding to unexpected obstacles.

Each performance measure bar included in this report displays the 23 projects' total **actual accomplishments to date** and the total **planned accomplishments to date**—what performance targets projects planned to achieve between fiscal year (FY) 2011 and FY 2014, which may not equate to 50 percent of lifetime goals. Each bar also includes the 23 projects' total **planned lifetime accomplishments** (what projects plan to achieve from the start of



implementation through FY 2019). **If the color on top is light green, the projects exceeded their targets. If it is dark green, the projects did not meet their target.**

Ecological Indicator Maps: Each ecological indicator (watershed condition, invasive species, wildlife habitat, and resiliency of landscape to fire) includes a map depicting how CFLR projects assessed their progress toward defined desired conditions. Each region where data are available shows a pie chart with the number of projects assessing progress as “Good,” “Fair,” or “Poor.” In the example that follows, the Pacific Northwest Region had three projects assess progress as “Good” and two projects as “Fair.”



Dinke Landscape Restoration Project, CA (Dorian Fougères)

- **Annual reports:** Provide yearly updates on performance measures and expenditures.
- **Treatments for Restoration Economic Analysis Tool (TREAT):** An economic tool developed by the Forest Service to estimate employment and labor income impacts from proposed restoration activities.
- **Risk and Cost Analysis Tool (R-CAT):** An economic modeling tool developed to estimate wildland fire management cost savings using the analysis outputs and other information on treatment costs and revenues.
- **National Forest Foundation Collaboration Survey:** NFF and the CFLR Coalition coordinated two national surveys to assess the successes and challenges of collaborative efforts.
- **Ecological Indicator Reports:** Each CFLR project developed a set of desired conditions across four ecological categories: (1) **resiliency of landscapes to fire**, (2) **watershed condition**, (3) **invasive species**, and (4) **wildlife habitat**. Projects then developed measurable indicators to gauge progress toward these desired conditions, resulting in an assessment of “Good,” “Fair,” or “Poor.” These ratings are meant to provide for a programmatic-level review of all projects; they are not intended to compare projects or regions to one another. Furthermore, some projects do not yet have data available to assess certain ecological indicators, because they are in the beginning stages of implementation and have not yet collected all the relevant monitoring data.

Developing National Indicators

In 2011, the NFF led a process with collaborative partners and Forest Service representatives from each of the first 10 CFLR projects to develop a set of national indicators. Participants set as core principles that the indicators should maximize project autonomy and minimize additional reporting, while responding to the purpose of the authorizing legislation. **The resulting five indicators, which form the basis of this 5-year report, address (1) economic impacts, (2) fire risk and costs, (3) ecological condition,**

(4) collaboration, and (5) leveraged funds. The indicators are designed to tell a national story about the CFLR program, measure outcomes across projects, encourage regular collection and reporting of data, and provide a coarse-scale picture of programmatic impacts.

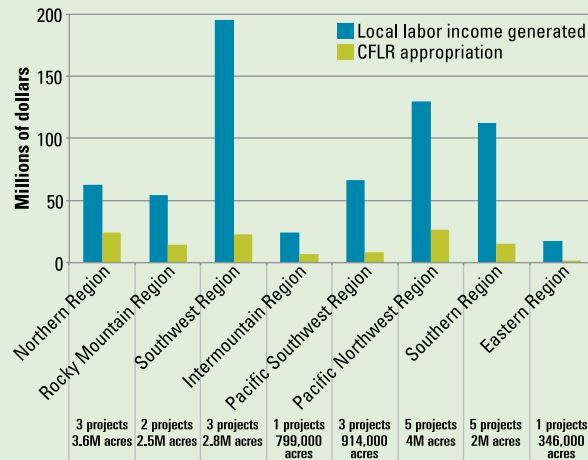
The data used to support these indicators come from a number of sources³, including—

³ Visit <http://www.fs.fed.us/restoration/CFLRP/index.shtml> for additional information and project reports.

ENCOURAGING ECONOMIC WELL-BEING

Local labor income includes total impacts from project funding expended, including matching funding. Regional variances are due to a number of factors, including differences in the amount of CFLR funding requested by each project in their proposals, the size of the landscape, and differences in the types of jobs projects may generate.

CFLRP Investments and Associated Local Labor Income Outputs (FY 2011-FY 2014)



CFLR creates or maintains an **average of 4,360 local jobs each year** (FY 2011–FY 2014)

Between FY 2011–FY 2014, CFLR projects generated over **\$661 million in local labor income**⁴

“Without the CFLR we would simply not be here. Without the funding, guidance, and help, MTM would have closed during the recession. We reinvented our company to do forest restoration.”

—Mt. Taylor Machine, LLC, Zuni Mountain, NM

By investing in forest and watershed restoration, the 23 CFLR projects generate considerable economic impacts in rural communities. Studies have shown that, in general, dollars invested in restoration **double their value in economic outputs** as they flow through the community⁵. CFLR dollars help bring in project managers, contractors, and crews who purchase equipment and services and spend wages on goods and services in the local community. Additionally, CFLR projects have helped forestry and related **businesses stay open, or even expand**. Even so, the lack of local markets and infrastructure for forest products remains a major hurdle. (See the “Successes and Challenges” section for further discussion about forest products.) Restoration work also creates a range of jobs outside the forestry industry, such as hiring crews to construct fish passage structures, maintaining and decommissioning roads, treating noxious weed infestations, and reforestation with native trees and plants. In fact, one study shows that **every \$1 million spent on restoration activities generates 15 to 24 local jobs, comparable to the construction and infrastructure sectors**. Healthier forests and improved infrastructure can also draw visitors to the forest, who then support the local economy by spending in area communities.



Deschutes Collaborative Forest Project, OR (Ally Steinmetz)

Weiser-Little Salmon Headwaters, ID: Between 2012 and 2014, the Payette National Forest awarded four stewardship contracts to Evergreen Forest, a local company that owns and manages the last remaining local sawmill. **Thanks to CFLR project area sales, the mill added a second shift and created 15 full-time jobs.** As of February 2014, one stewardship contract is halfway complete and has generated 3.4 million board feet, \$380,000 in employee wages at the mill, \$183,000 in employee wages on site, and \$620,000 in wages to local contractors. **Evergreen Forest paid the Forest Service \$690,000 for stumpage, which helped offset restoration treatment costs** (such as road and trail improvements, aquatic organism passage projects, and prescribed fires). The stewardship contract manager at Evergreen Forest, who is also a member of the CFLR Coalition, understands the goals and objectives of the stakeholders and the project objectives. That knowledge contributes to successful implementation of the stewardship contract.

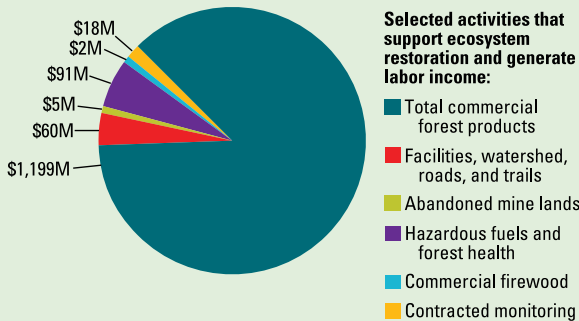
⁴ Employment and labor income impacts are estimated using the Treatments for Restoration Economic Analysis Tool (TREAT), a standard interface designed for CFLR that generates project impacts from proposed restoration activities. Each year, the projects work with Forest Service economists to complete analysis. Learn more at <http://www.fs.fed.us/restoration/CFLRP/guidance.shtml>. Job and labor income figures include part- and full-time direct jobs (in industries involved directly in doing the work—for example, loggers and contractors) and indirect and induced jobs (in the industries that provide supplies and services to the direct industries and by employees spending wages in the local economy). The local labor income estimates are based on “local” impact areas: the counties where the activities will occur for each project. The national estimates use the whole United States as the impact area, thereby capturing all economic activity.

⁵ See <http://ewp.uoregon.edu/sites/ewp.uoregon.edu/files/downloads/BP23.pdf> for report.

ENCOURAGING ECONOMIC WELL-BEING

The **Accelerating Longleaf Pine project in Florida** has contributed more than **\$10 million to gross domestic product**, garnered more than **\$1 million in State and local tax revenue**, and generated **\$7 million in salaries and wages**.

CFLRP National Labor Income Generated by Activity Type (FY 2011–FY 2014)



A range of CFLR project activities support restoration and generate labor income. More than 87 percent of labor income generated nationally is from commercial forest products activities like logging and milling of restoration byproducts. Other activities also make significant contributions to labor income, from culvert work to monitoring.

This graph does not include the economic impact from visitors attracted to the forest and surrounding communities for recreation opportunities.

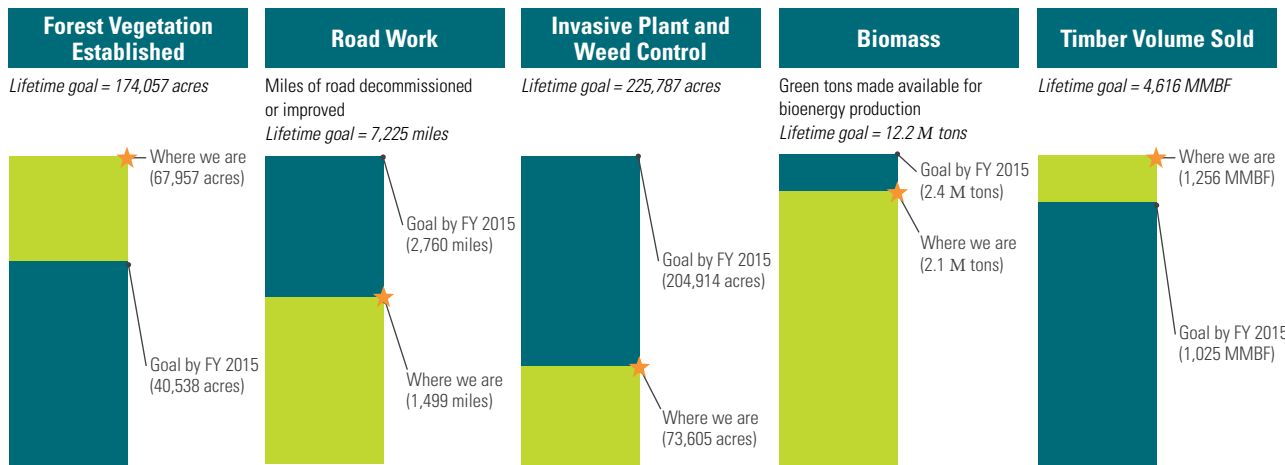


Southwest Jemez Mountains, NM

Amador Calaveras Cornerstone, CA: Unemployment in rural Amador and Calaveras Counties is high, ranging from 9 to 13 percent during the past few years. Schools are in a constant threat of closure. The CFLR program has enabled the Forest Service to expand work with the Calaveras Healthy Impact Products Solutions (CHIPS), a local nonprofit that provides on-the-job training for local workers to implement restoration activities. **The Eldorado and Stanislaus National Forests' partnership agreement provides CHIPS participants with job-training opportunities within the CFLR landscape**, where crews help with a range of activities that include hazardous fuel-reduction treatments. In the past 3 years, the program has expanded to two crews and, in FY 2014, CHIPS contributed more than \$79,000 in in-kind contributions to the project.

Southwest Jemez Mountains, NM: Walatowa Timber Industries (WTI), LLC, is a joint venture that started in 2012 between the Jemez Community Development Corporation—which supports economic development within the traditional community of Jemez Pueblo, a federally recognized tribe—and TC Company, a logging and milling business with decades of experience in the Jemez Mountains. **“WTI is an important source of economic development for the Pueblo of Jemez, providing both permanent and seasonal jobs,”** said John Galvan, Interim Natural Resources Director for the Pueblo. **“The viability of our enterprise hinges on the local and large-scale forest restoration activities like those proposed under the CFLR.”** The program has expanded to two crews.

A suite of hazardous fuels reduction and restoration activities contribute to job opportunities and economic impact. The CFLR performance measures below represent a snapshot of project activities and related outputs that contribute to job opportunities and labor income:



The bar charts above shows accomplishments for all 23 CFLR projects from the start of project implementation. See “Successes and Challenges” for further discussion of accomplishments. More accomplishments are expected in the next 5 years.

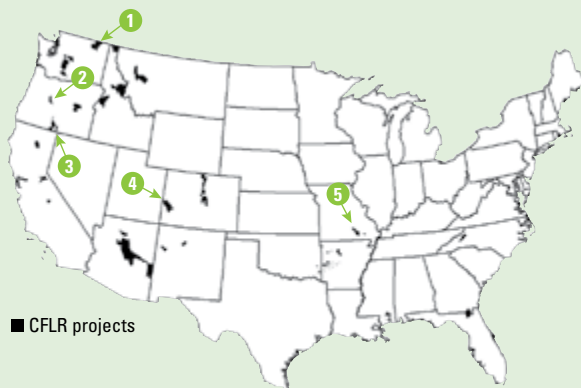
WILDFIRE RISKS AND COSTS

One study attempting to show the full costs of fire in the Sierra Nevada's Mokelumne Watershed suggested that **expected benefits of fuel treatments are two to three times the fuel-treatment costs.**⁸

Federal, State, and local partners, has led the way in this more com-prehensive approach. (See the "Successes and Challenges" section for further discussion.)

While estimating potential fire suppression savings associated with fuel treatments is difficult, the Forest Service recently developed the Risk and Cost Analysis Toolkit (R-CAT) to improve our understanding of cost savings using fire modeling. The initial R-CAT results indicate the potential for CFLR fuel treatments to reduce various fire management cost components. R-CAT, however, captures **only a small part of the return on the investments that forestry with a fuel treatments objective can provide.** Visit <http://www.fs.fed.us/restoration/CFLRP/index.shtml> for information on R-CAT and results.

Risk and Cost Analysis Toolkit (R-CAT) Snapshots



1 Reducing Small Fire Costs Northeast Washington Vision 2020 (WA)

- Projected 119,827 treatment acres.
- **Modeled annual small-fire savings after fuel treatments—\$21,226.**

- Modeled annual large fire savings after fuel treatments—\$314,763.
- Modeled annual savings from decreased emergency response costs after fuel treatments—\$169,443.
- **Treatments result in potential for expanded fire management approaches on 5 to 19 percent of treated landscape.**

2 Reducing Wildfire Risk Deschutes Collaborative Forest Project (OR)

- Projected 80,000 treatment acres.
- **Fuel treatments help protect—**
 - High-value recreation areas.
 - Scenic viewsheds.
 - Old growth forests.
 - Municipal watersheds.
 - Wildland-urban interface communities.

4 Reducing Post-Fire Burned Area Emergency Response Costs Uncompahgre Plateau (CO)

- Projected 69,646 treatment acres.
- **Modeled 22 percent decrease in annual post-fire costs.**

3 Increasing Savings with Beneficial Fire Lakeview Stewardship Project (OR)

- Projected 145,391 treatment acres.

5 Increasing Revenue Missouri Pine Oak (MO)

- Projected 179,594 treatment acres.
- **Modeled \$4.1 million in total net revenue in wood product sales from treated acres.**

Since 2010, CFLR projects have **treated more than 1.45 million acres of hazardous fuels.** Research and field experience have shown that **hazardous fuel treatments can reduce the size, likelihood, and severity of wildfires.**

Recent reports suggest that when the long-term benefits of avoided wildfire costs to society are fully considered—including avoided property damage and reconstruction, avoided sedimentation in the water supply, and so forth—the **benefits easily exceed the costs of treatment**⁶. One case study on the Deschutes National Forest showed that large-scale implementation of fuel treatments planned as a CFLR project was expected to result in substantial reductions of wildfire size and suppression cost on both a per-fire and landscape basis⁷. Since the act authorizing the CFLR program was passed in 2009, the focus of wildfire management strategies has expanded from wildfire cost containment to overall risk reduction. The National Cohesive Wildland Fire Management Strategy, collaboratively prepared by

⁶ Combrink et al. 2013. A full cost accounting of the 2013 Schultz Fire. ERI—Issues in Forest Restoration. Flagstaff, AZ: Northern Arizona University—Ecological Restoration Institute.

⁷ Thompson et al. 2013. Quantifying the potential impacts of fuel treatments on wildfire suppression costs. Journal of Forestry. 111(1): 49–58.

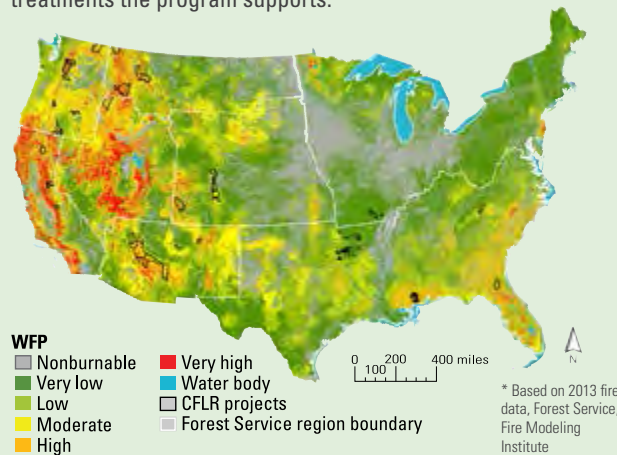
⁸ See <http://www.sierranevada.ca.gov/our-work/mokelumne-watershed-analysis> for report.



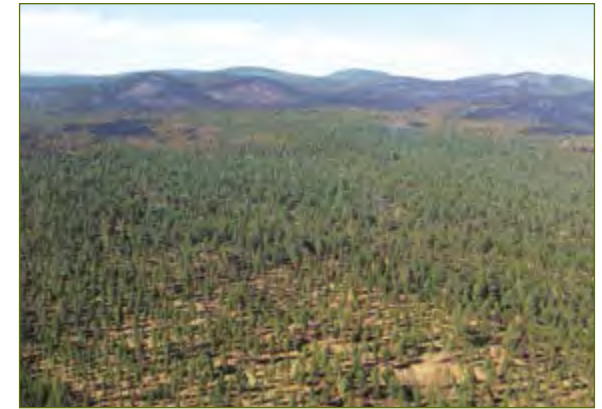
Two Bulls Fire in Bend, OR, threatened thousands of homes (Ally Steinmetz)

ECOSYSTEM RESTORATION: INCREASING THE RESILIENCE OF LANDSCAPES TO FIRE

The map below depicts **wildland fire potential (WFP)**—areas where high-intensity wildfires are more likely to occur. Although the map is not a forecast, it does provide context for strategic long-term risk reduction. Many **CFLR program boundaries** overlap with high WFP, underscoring the importance of the treatments the program supports.



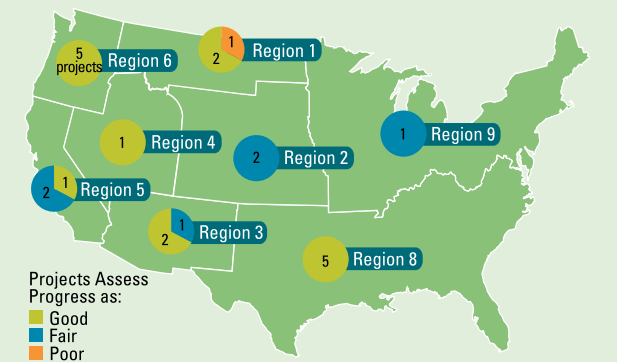
In the past century, changes in land management, including fire suppression, have led to overgrowth and accumulation of hazardous fuels in forests with historically frequent fires. Because of these hazardous fuels, some forests now see high-severity fires even under moderate weather conditions. **Reestablishing desired vegetation conditions through mechanical thinning or prescribed burning makes landscapes more resilient to fire and reduces the risk of catastrophic wildfire.** These treatments help preserve and restore critical wildlife habitat, protect the water supply, enable firefighters to manage fires more safely, reduce the risk to communities, and may also result in providing wood byproducts to benefit local economies.



4FRI aerial photo of burn area with mostly low intensity impacts

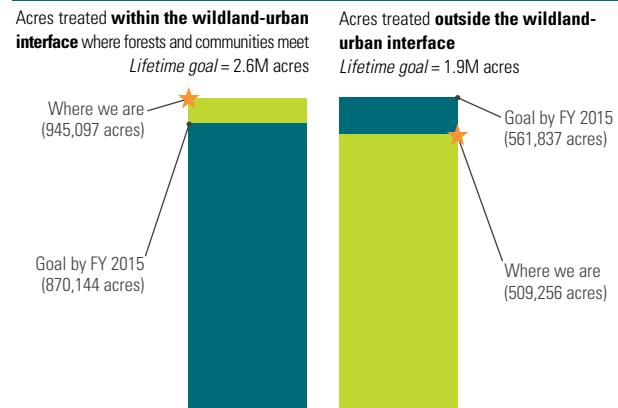
Southwestern Crown of the Continent, MT: The goals of fuel treatments within the Meadow Smith project area included increasing open forest stands, protecting old growth from severe wildfire, reducing fire risks to communities, and increasing the overall health and resiliency to threats. The project leveraged multiple funding sources, including CFLR dollars, to perform these treatments. The Flathead National Forest performed a portion of the fuel treatment in this project area, particularly in the wildland-urban interface, through a stewardship agreement in partnership with the Rocky Mountain Elk Foundation. In the aftermath of the 2012 Condon Fire, it became apparent that **the size and severity of the fire and damage to the landscape would have been much greater without previous treatments.**

CFLR Projects' Progress Towards Desired Natural Fire Conditions



Twenty-two of the 23 projects with data available to assess progress towards desired natural fire conditions reported "Good" or "Fair" progress.

Reduced Fire Risk

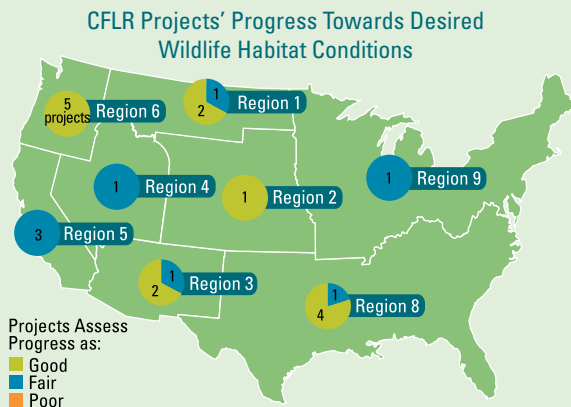


The bar charts above shows accomplishments for all 23 CFLR projects from the start of project implementation. More accomplishments are expected in the next 5 years.

Four Forest Restoration Initiative, AZ: In May 2014, a fire was reported within the Four Forest Restoration Initiative (4FRI) project area and preevacuations were ordered for nearby neighborhoods. **However, thanks to fuel treatments implemented in collaboration with Greater Flagstaff Forest Partnership—which helped form the 4FRI collaborative—only 3,115 acres of 21,227 acres burned at high intensity.** This behavior mimicked what was expected of a healthy ponderosa pine forest maintained by frequently recurring fires. Since 2010, the entire 4FRI project area has seen 299,000 acres of hazardous fuels reduction contracts awarded and projects completed, including prescribed burning and mechanical thinning.

ECOSYSTEM RESTORATION: WILDLIFE HABITAT

The wildlife on a particular landscape tells a story—a story of healthy ecosystems, a history of how the land has been managed, and even clues about what the ecosystem may need in the future to ensure fish and wildlife can be enjoyed for generations. **Federal and State agencies, non-governmental organizations, and private citizens across the country have partnered through the CFLR program, intent on managing fish and wildlife habitat collaboratively with a focus on restoring the structure, composition, and function our public lands need to ensure viable and sustainable populations of game, nongame, and federally listed species.**



All 22 projects with data available to assess progress towards desired wildlife conditions reported "Good" or "Fair" progress.

Restoring Critical Habitat in the Southeast

The red-cockaded woodpecker is an endangered species that lives in longleaf pine habitat in the southeast. Its current range is only 1 percent of its historical range. Both the **Shortleaf Bluestem Community** project in Arkansas and Oklahoma and the **Longleaf Pine Ecosystem Restoration and Hazardous Fuels Reduction** project (hereafter, the Longleaf Pine project) in Mississippi are working with partners to bring the red-cockaded woodpecker back. As a direct result of CFLR funding, the Longleaf Pine project and its partners, including the Mississippi National Guard, **created a new subpopulation in FY 2014 in an area that red-cockaded woodpecker has not occupied in 35 years.** The project also improved the bird's longleaf pine habitat across 117,000 acres. The Shortleaf Bluestem Community project leveraged \$114,700 from the Oklahoma Department of Wildlife Conservation for habitat improvement work and \$2,500 for monitoring efforts to make sure the bird subpopulations thrive. These projects work together with the **Missouri Pine Oak CFLR** project to share wildlife monitoring techniques.



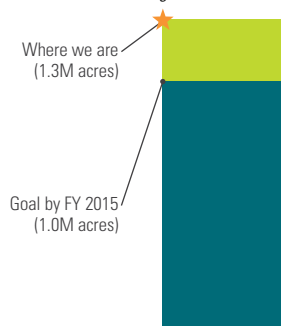
Selway-Middle Fork Clearwater Rivers, ID: Salmon, steelhead, and other fish that migrate up river from the sea are some of the most important resources supported by this 1.4-million-acre CFLR landscape. Fish play a significant role in the culture of the Nez Perce Tribe. Recreational fishing is vital for the local economy, and migrating fish are a crucial source of nutrients for bears, birds, and other fish. The **CFLR program, in close partnership with the Nez Perce Tribe, has provided the project with more opportunities to accomplish aquatic restoration.** Between 2010 and 2014, the Forest Service and Nez Perce Tribe teamed up to implement more than \$7 million in aquatic restoration projects. In FY 2014, one of the last remaining barriers to fish passage was replaced, restoring important habitat connectivity. **CFLR-funded monitoring efforts helped identify 8 miles of priority road removal to eliminate chronic sedimentation into trout and salmon habitat.**



Longleaf Pine Ecosystem Restoration and Hazardous Fuels Reduction, MS, red-cockaded woodpecker translocation

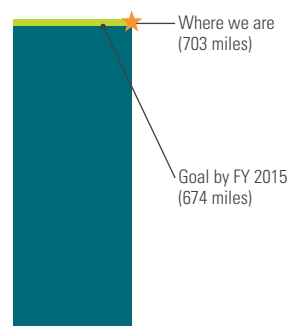
Terrestrial Habitat

Acres of terrestrial habitat restored or enhanced
 Lifetime goal = 4.1M acres



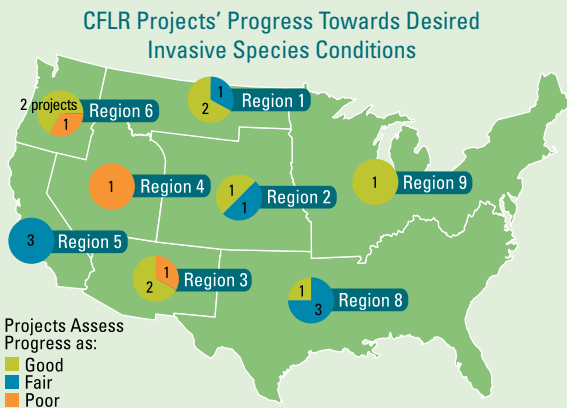
Stream Habitat

Acres of stream habitat restored or enhanced
 Lifetime goal = 1,358 miles



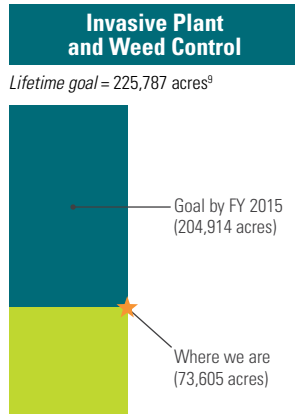
These bar charts show accomplishments for all 23 CFLR projects from the start of project implementation. More accomplishments are expected in the next 5 years.

ECOSYSTEM RESTORATION: INVASIVE SPECIES



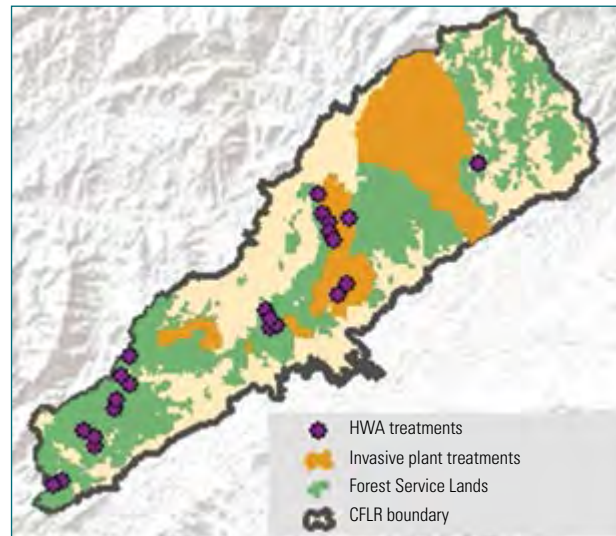
Sixteen of 20 projects with data available to assess progress towards desired invasive species conditions reported "Good" or "Fair" progress.

Southwest Crown of the Continent (MT) worked with the Trust for Public Land and the Montana Department of Natural Resources and Conservation to leverage \$26,760 to treat 629 acres for noxious weeds in FY 2014.



The bar chart above shows accomplishments for all 23 CFLR projects from the start of project implementation. This ecological indicator is seeing slower progress for a variety of reasons discussed in the "Successes and Challenges" section. More accomplishments are expected in the next 5 years.

Across the country, hundreds of species of invasive insects, plants, fungi, mollusks, mammals, and other organisms infest millions of acres of land, causing disruptions to forest and watershed health and significant economic damage for local communities. From the emerald ash borer's destruction of the American chestnut to the zebra mussel's damage to freshwater ecosystems and related industries, it is clear that effective landscape-scale restoration must include treatment of existing invasive species infestations and prevention and management of new ones. Invasive species management operations provide many job opportunities in local communities. CFLR collaboratives work closely with partners to inventory and map infestations, implement sound treatment options, and monitor treatment effectiveness. Hundreds of in-kind volunteer hours support these projects.



⁹ Figure does not include treatments for insects or other nonplant pests.

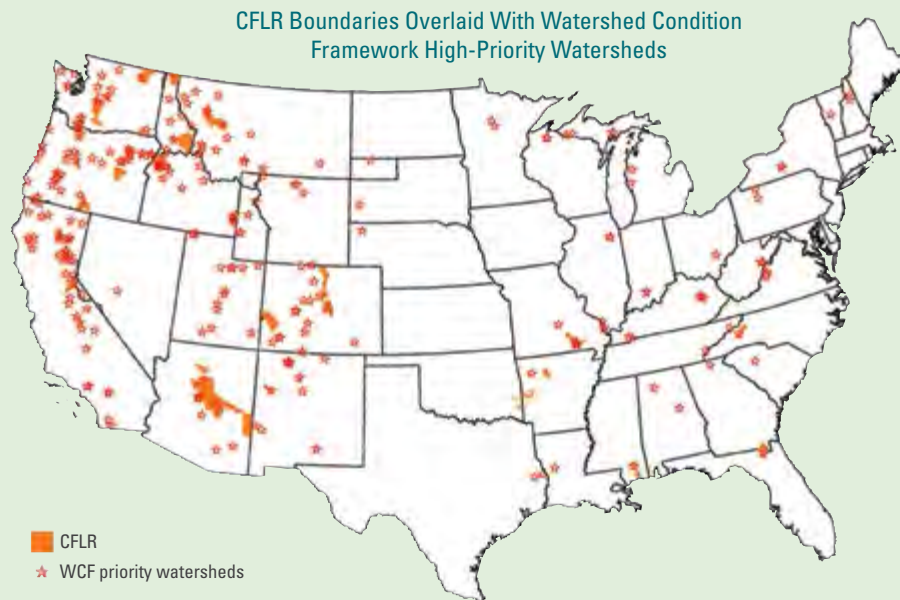


Grandfather Restoration, North Carolina Japanese Knotweed infestation, <https://grandfatherrestorationproject.wordpress.com>

Grandfather Restoration Project, NC: Hemlocks play a vital role in forests of the Eastern United States, providing habitat for a variety of wildlife and plants and regulating stream temperatures for native trout. During the past 10 years, hemlock populations have been decimated by the hemlock woolly adelgid, an invasive insect from East Asia. Left unchecked, the insect will likely wipe out native hemlock in the Southeast. The Grandfather Restoration Project brings together partners—including Forest Service managers and researchers, the North Carolina Wildlife Resources Commission, MountainTrue, and Wild South—to address the infestation along with other invasive threats, including invasive plant species like princess tree and Japanese knotweed. The CFLR program provides the resources and partnerships needed to expand treatment efforts to protect the forest from invasive species, including using herbicides to treat infestations, releasing biocontrol, and employing mechanical removal of target species. Since its implementation in 2012, the project has treated thousands of hemlocks for hemlock woolly adelgid and 2,359 acres for invasive plant species. Monitoring from MountainTrue shows that, on average, the effectiveness in removing target plant species is 70 percent. Monitoring information enables the Forest Service and its partners to use an adaptive management approach to maximize treatment effectiveness.

ECOSYSTEM RESTORATION: WATERSHED

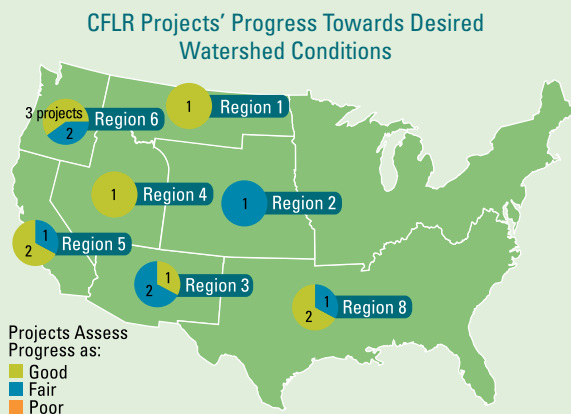
At least **124 million Americans** benefit from water from National Forest System lands.



Water is one of the most important resources derived from national forests. Watersheds—where water collects and flows into a common body of water—are vital for clean drinking water, irrigation, recreation, and healthy fish and wildlife habitat. The more resilient a watershed’s condition—its ability to regulate crucial soil and water processes in the face of disturbance—the better it can provide these services. Many CFLR projects include priority watersheds (see map on left). To maintain and improve these areas, collaboratives decommission, improve, and maintain roads to decrease sedimentation, upgrade culverts, and improve water and soil quality to help regulate the flow of water.

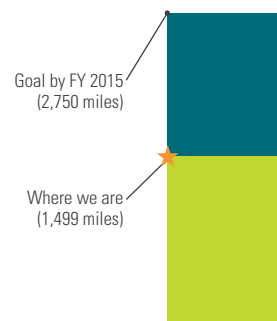


Southwest Crown of the Continent, MT, before and after road work

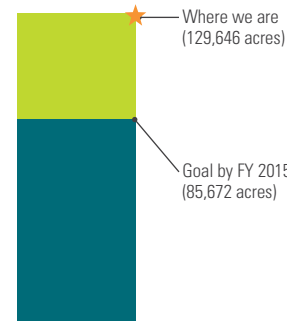


All 19 projects with data available to assess progress towards desired watershed reported “Good” or “Fair” progress.

Roads
Miles of roads improved or decommissioned
Lifetime goal = 7,225 miles



Soil and Water
Acres maintained/improved for watershed health
Lifetime goal = 1.1M acres



The bar charts above shows accomplishments for all 23 CFLR projects from the start of project implementation. For a variety of reasons, projects plan to do the majority of road work in the second half of the program timeframe.

Deschutes Collaborative Forest Project, OR: The Deschutes Collaborative Forest Project landscape contains the headwaters of Whychus and Tumalo Creeks, which serve as **municipal watersheds for the cities of Sisters and Bend** and provide important aquatic habitat and recreation opportunities. These watersheds have been impacted by stream channelization, road construction, flow diversion, development, and fire. Restoring watershed health is a vital component of the CFLR project. **The project has already completed six of its nine planned watershed restoration projects** and the ongoing Whychus Floodplain Project is partially complete. The remaining two projects are scheduled for implementation in FY 2015. Since FY 2010, the project has decreased sedimentation delivery into waterways by decommissioning more than 5 miles of roads, improved more than 3,270 acres of water or soil resources to achieve desired functioning conditions, enhanced 170 acres of riparian habitat, reconnected more than 2 miles of stream to its floodplain, and removed fish barriers (dams) to open up 13 miles to fish habitat. Two subwatersheds within the CFLR landscape have shifted to a “Properly Functioning” Watershed Condition Framework (WCF) score.

BUILDING COMMUNITY RELATIONSHIPS



Southwest Crown of the Continent, MT

“Through collaboration, we get better outcomes, be they environmental, economic, or social. That’s why collaboration is worth all the time and effort.”
—Kootenai Valley Resource Initiative, ID

“The partnership is very functional in coming together, deciding what needs to be done and who will do it, and getting on with the job of implementation and making results happen.”
—Shortleaf Bluestem and Ozark Highlands, AR

“The CFLR project has significantly advanced our level of understanding and agreement regarding the most effective land management strategies for restoration.”
—Colorado Front Range Collaborative, CO



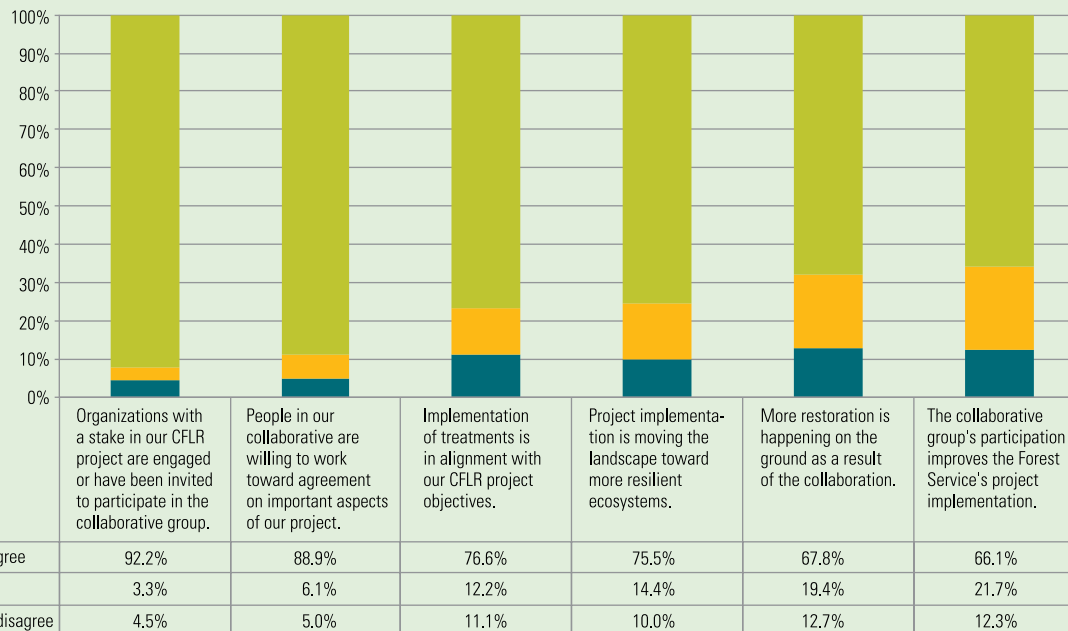
Deschutes Collaborative Forest Project, OR, field trip discussions (Ally Steinmetz)

“All stakeholders in the collaborative share a deeper understanding of the challenges faced by various interests—timber sales, forest products, landscape concerns, habitat and forest ecology, water, recreation and, most of all, the risk to all of it from catastrophic wildfire.”
—Deschutes Collaborative Forest Project, OR

Southern Blues Restoration Coalition, OR

“The Southern Blues Restoration Coalition’s CFLR project was developed by public stakeholders working with the Forest Service. And, at the time, it was a leap of faith: while we had been working together for a few years already, the relationships were tenuous and many were still skeptical of collaboration. However, by formalizing our collective vision for the forest in our CFLR proposal and then working together on its implementation, we have rebuilt a solid foundation based on trust and mutual respect. **As a result of our CFLR project, the Southern Blues Restoration Coalition has seen demonstrable positive improvements in forest health and the health of local communities: we have reduced the risk of uncharacteristic wildfire and improved wildlife habitat. Local businesses are once again booming.** By working together, we are on track to complete all of our watershed restoration goals in half the time predicted in our original CFLR proposal. We wouldn’t be in this position without the CFLR program.”
—Southern Blues Restoration Coalition member, OR

CFLRP Collaboration Indicator Data—FY 2014



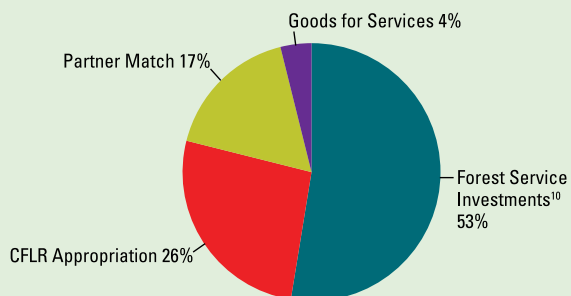
The collaboration indicator data provide results from a survey administered by the NFF in FY 2014. All CFLR project collaboratives provided results, totaling 180 respondents. Complete survey results are available at <http://www.fs.fed.us/restoration/CFLRP/index.shtml>.

PARTNER CONTRIBUTIONS

Between FY 2010 and FY 2014, **CFLR projects attracted more than \$76.1 million in partner match.**

Between FY 2012 and FY 2014, **CFLR projects leveraged more than \$145 million to help achieve project goals.¹¹**

Total Project Funding Expended (FY 2010-FY 2014)



Partner match includes in-kind contributions and funds contributed through agreements. Goods for services is service work accomplished within a stewardship contract. Forest Service investments is funding made available from the Forest Service to support these high-priority efforts.

CFLR funds provide new and expanded opportunities for critical restoration work and monitoring. What's more this funding also attracts additional partner dollars to go toward strategic, landscape-level initiatives.

Partner contributions are trending upward over time as projects establish new partnerships and agreements are put in place. In FY 2010, partner contributions comprised 7 percent of total funding; by FY 2014, this number doubled to 15 percent of total funding expended.



Zuni Mountain, NM (Forest Guild)

¹⁰ Forest Service investments include Forest Service balances that may be available in a given year to go to priority projects.

¹¹ **Leverage** includes funds or in-kind services that help projects achieve the objectives outlined in their proposal, within the defined landscape, but that do not meet match qualifications. Examples include investments on non-NFS lands within the defined landscape, restoration equipment, and worker training.

Colorado Front Range, CO: *"This focused effort on Federal lands has leveraged new and significant funding from non-Federal partners such as water utilities, corporate investors, private foundations, and others who see the benefit of building on a sustained, strategic effort.... Although the CFLR program doesn't fund non-Federal land treatment, a number of individuals and organizations have been very successful in garnering funds to support treatment on adjacent non-Federal lands because of the potential for a larger scale impact when the Federal and non-Federal treatments are combined."*

—Colorado Front Range Collaborative member, CO

In FY 2014, the project attracted **\$2.8 million in partner match and \$10.8 million in leverage dollars.**

(Partner match and leveraged dollars from: Colorado Forest Restoration Institute, Denver Water, Arbor Day Foundation, Colorado Springs Utilities, Front Range Roundtable, Rocky Mountain Tree Ring Research, Coalition for the Upper South Platte, Colorado State Forest Service, USDA Natural Resources Conservation Services, and Waldo Fire Recovery Group)

Northeast Washington Vision 2020, WA: **CFLR has enabled Northeast Washington Vision 2020 to bring in new partnerships to accomplish critical restoration work and to engage youth in natural resource management.** In FY 2014, the project used five different programs involving students ranging in age from elementary school through college. Partners included Northwest Youth Corps, Curlew Job Corps, Worksource, Student Conservation Association, Washington State University, and the University of Washington. Students contributed to project goals by accomplishing fuel reduction and fencing projects, setting up plots and monitoring recently treated areas, monitoring treatment impacts on wildlife, and completing trail maintenance to improve recreation opportunities. **Without CFLR, these trainees would not have had these opportunities to work with Forest Service personnel and practice the techniques they had learned in school.** Partner in-kind contributions for FY 2014 totaled more than \$305,300.

SUCCESSSES AND CHALLENGES: THE NEXT 5 YEARS

Restored, healthy, and resilient ecosystems sustain local communities and cultures through economic well-being and recreation opportunities; provide water, timber, and fuel wood; and support vital ecological processes that support wildlife and maintain healthy soils and watersheds. **Across the country, the 23 CFLR projects have made significant progress building more resilient forests and watersheds, developing community relationships and capacity, and generating economic benefits.** As highlighted in this report, the accomplishments the projects have achieved are already significant and are expected to build in the coming years.

As we reflect back on the past 5 years—and look forward to next 5—it is important to share some of the key successes, challenges, and trends that we expect will continue to affect the CFLR projects.

Collaborating at the Landscape Scale

During the past 5 years, we learned that bringing diverse community perspectives together through collaborative processes helps build resiliency to unexpected events, identify creative solutions, and create the social agreements that ensure long-term sustainability and support for project goals. For example, in 2012, the Lakeview Stewardship CFLR in Oregon faced an unusually severe wildfire that scorched more than 90,000 acres, including planned treatment acres within the CFLR. Thanks to the collaborative efforts of the Lakeview Stewardship Group and the Fremont-Winema National Forest, the project was able to quickly regroup and develop new strategies for restoration. In 2014,



Dinkey Landscape Restoration Project, CA (Dorian Fougères)

the project was awarded a Forest Service Chief's Honor Award for "Meeting America's Needs." Furthermore, many projects have seen large landscape decisions approved without appeals. As a member of the Uncompahgre Partnership in Colorado stated, "There is no way a 17,000 acre decision would not have been appealed without collaboration." Collaborating at the landscape scale provides new opportunities for getting work done. Meaningful collaboration, however, takes a significant amount of time and effort from all involved parties, many of whom volunteer their time and expertise. Relationships must continue to be built and sustained over time as issues and staff members change. Furthermore, some projects have more contentious histories and issues to confront than others. We continue to work with community partners to facilitate the sharing of best practices and tools as we all learn what works best over time.

Utilizing Biomass

All CFLR applicants were required to describe plans to "use woody biomass and small-diameter trees produced from projects implementing the strategy" in their proposals. **By utilizing woody byproducts from restoration treatments,**

CFLR projects can help offset treatment costs and generate economic benefits for the community. To date, the 23 projects have generated more than 2.1 million green tons of woody biomass from hazardous fuel reduction and restoration treatments on Federal land made available for bioenergy production. Because of a number of factors external to CFLR, however, including low natural gas prices and the unanticipated impacts of the 2008 economic downturn on the timber market, many of the cogeneration and milling facilities that were planned in project areas are on hold or have shut down. The projects continue to find innovative ways of addressing this issue; such innovations include the Uncompahgre Plateau (Colorado) project's biomass feasibility study, the Tapash (Washington) project's work with USDA Rural Development to develop utilization opportunities, and the Burney Hat (California) project's plans to make use of the Biomass Crop Assistance Program authorized under the 2014 Farm Bill. Even so, without a significant change in demand for biomass and associated development of processing infrastructure, it will be challenging for the projects to meet the proposed lifetime goals for biomass utilization.

Reducing Wildfire Risk

In the 6 years since the act was passed, the emphasis on wildfire management strategies has expanded from cost containment to overall risk reduction. The National Cohesive Wildland Fire Management Strategy, collaboratively prepared by Federal, State, and local partners, has led the way with its focus on resilient landscapes, fire-adapted communities, and safe and effective wildfire response. The Forest Service has been developing ways to quantify risk and measure change in risk over time, and the CFLR projects have provided a fertile proving ground for testing methodology.

SUCCESSSES AND CHALLENGES: THE NEXT 5 YEARS (CONTINUED)

The R-CAT was developed to try to estimate anticipated wildfire cost savings from fuel treatments on CFLR landscapes, defining management costs as large- and small-fire costs, burned area emergency response, rehabilitation costs, fuel treatment costs, and potential revenue from wood product sales. Several teams also used R-CAT to analyze how reestablishing natural fire regimes could also reduce fire management costs. At this time, R-CAT provides only limited results. R-CAT analysis has been challenging for many of the projects because they vary greatly in terms of staff capacity, the accuracy of the locally available fuels data, and the ability to predict when and where treatments will occur. Given these limitations, the best use of R-CAT results is to help evaluate the potential ways for fuel treatments to reduce wildfire suppression costs on the landscape as one data point that CFLR projects can consider when prioritizing fuel treatments. For more information about R-CAT and project results, visit <http://www.fs.fed.us/restoration/CFLRP/index.shtml>. We will continue to refine and develop tools to better analyze the complete picture of costs and benefits from hazardous fuel treatments.

Multi-Party Monitoring

Multi-party monitoring is a fundamental requirement of CFLR. **Monitoring and assessment involving multiple partners helps ensure transparency and accountability, expand capacity, and can provide employment and training opportunities for local workers and youth. It is an innovative approach that engaged local citizens in landscape restoration over time.** These feedback loops are especially important with the inherent complexities of working at the landscape scale. All projects track progress through the annual reporting process, which includes quantitative and qualitative data. By continually evaluating

successes and challenges, projects are able to work together to adapt and prioritize work on the ground. In FY 2014, projects submitted their “ecological indicators” to assess progress toward desired ecological conditions (see page 4 for more details). Because the projects are at varying stages of implementation (with some projects having 5 years of implementation under way and others only 3, not including unexpected delays due to events such as wildfire), progress on developing long-term monitoring plans varies. In FY 2013, the Southwest Crown of the Continent project in Montana received a grant from the Kresge Foundation to work with local schools to carry out forest and stream monitoring. The program has been very successful in establishing permanent monitoring sites and will add a fourth school in FY 2015. The 4FRI project in Arizona brought on a full-time monitoring coordinator to work with the 4FRI Stakeholder Group to finalize the multiparty monitoring plan for the first million-acre Environmental Impact Statement and adaptive management plan. Other projects are working through the important, but often time-consuming, process of prioritizing monitoring efforts with their collaboratives. As required by the program, projects will continue assessing impacts for no fewer than 15 years after the start of implementation.

Accelerating Restoration

One goal of the program is to accelerate restoration work on hundreds of thousands of national forest acres across the country. It is clear that the 23 CFLR projects have already made significant progress in increasing the scale of treatments and accelerating the pace of projects. **Since the first 10 projects began implementation in 2010, CFLR has established more than 67,000 acres of forest vegetation, treated more than 1.45 million acres to reduce the risk of uncharacteristic wildfire, and improved more than 1.33 million acres of wildlife habitat.**

Accelerating restoration takes time: all projects have a ramp-up period while they develop contracts to complete the work, build community relationships and support, overcome anticipated events such as wildfire on the landscape, and plan specific treatment activities in project areas. CFLR represents a new way of doing business for many of those involved, and the shift toward large landscape-scale planning, implementing, and monitoring requires new approaches and techniques. As the program moves forward, these new approaches and lessons learned are shared among CFLR projects and beyond. It is also important to note that, because projects have different ecological, social, and economic contexts, the ramp-up period may take longer for some projects than others. Some landscapes, such as Lakeview Stewardship in Oregon, have had to revise their original plans because of catastrophic wildfire on the landscape.

While projects saw strong results overall, the invasive plants and roadwork indicators are not as far along, for a variety of reasons. Most projects anticipate faster rates or progress in the next 5 years. For invasive species, part of the challenge was that baseline data did not exist for many of the treatment areas, making it difficult to assess impact while projects build capacity to monitor efficacy. Furthermore, the approach of using herbicides for invasive species and weed treatments may require substantial collaborative deliberation. Projects may also focus on work related to prevention and early detection—work that is more costly and may result in lower acre outputs but that is of a higher priority. In the first few years, some projects had to focus on building infrastructure, including a market for restoration byproducts to help offset treatment costs, before they could focus on invasive species treatments. Roadwork has been slower than anticipated for a number of reasons, including the collaboratives’

SUCSESSES AND CHALLENGES: THE NEXT 5 YEARS (CONTINUED)

desire to first identify sedimentation “hotspots” for roadwork so that funding can be used efficiently and effectively. Deciding how and where to conduct roadwork can also require additional collaborative deliberation and education efforts.

The focus on restoring large-scale landscapes has also promoted new ways of thinking about the analysis of environmental impacts for proposed activities via the National Environmental Policy Act (NEPA). Investment in collaboration and use of new technologies can support these innovative approaches and result in the ability to implement on much larger landscapes after NEPA decisions are final. In FY 2014, the 4FRI, a partnership among more than 30 stakeholders and the Forest Service, released a draft decision for the Nation’s largest forest restoration plan to date.

Conclusion

One of the greatest marks of CFLR’s success is the degree to which it informs and improves other landscape restoration and management efforts. According to the Selway-Middle Fork Clearwater Rivers collaborative, the CFLR project has provided the foundation of the relationship between the Clearwater Basin Collaborative and the Forest Service, from which many other successes have grown. **CFLR synergizes with other efforts developed in the past few years to accelerate restoration through strategic landscape-scale, place-based management and an “all lands” approach.** For instance, several CFLR project landscapes overlap with the Forest Service Chief’s Joint Landscape Restoration Partnership to improve the health and resiliency of landscapes on both public and privately owned landscapes. As CFLR continues, lessons learned through the projects can continue to inform and inspire landscape-level, collaborative management efforts to accelerate restoration across the country.

As the program moves forward, CFLR will build on its successes; adapt and evolve as lessons are learned and shared and new science becomes available; and improve the ways in which we collaborate, implement, and monitor. One of the most important aspects of CFLR is its timeframe. Although we will likely not see the full range of impacts CFLR will have on the landscape and the community in 10 years, it is enough time to learn as we go and capture these lessons for projects and others interested in collaborative landscape management approaches. The additional \$20 million proposed in the FY 2016 President’s Budget would provide the opportunity for the program to expand the 23 existing projects and permit the investment in new CFLR projects. This additional support would expand CFLR’s ability to accelerate restoration work, reduce the risk of catastrophic wildfire, and generate jobs in rural communities.

The CFLR program’s successes would not be possible without the support and engagement of the local communities, counties, businesses, tribes, associations, nongovernmental organizations, and private citizens who bring their time, energy, and expertise to the local CFLR collaboratives.



Kootenai Valley Resource Initiative, ID



Southwest Jemez Mountains, NM (Jeremy Marshall)



Grandfather Restoration Project, NC, <https://grandfatherrestorationproject.wordpress.com>



Selway-Middle Fork Clearwater, ID



Ozark Highlands Ecosystem Restoration, AR