Colorado Forest Restoration Institute-Colorado State University
FY2015 ACCOMPLISHMENT REPORT
Agreement No. 15-DG-11031600-077

For FY2015 for Colorado Forest Restoration Institute (CFRI) at Colorado State University was allocated $150,000 to meet the intent of the Southwest Forest Health and Wildfire Prevention Act of 2004. The agreement was finalized July 27, 2015 under Domestic Grant No. 15-DG-11031699-077. As such many deliverables are in process and expected to be completed into FY16. The agreement end date is September 30, 2017.

This annual report for FY2015 contains information on the following:

- A comparison of actual accomplishments to the goals established for each work plan project. Where the output of a project can be readily expressed in numbers, a computation of the cost per unit may be required if that information is useful.
- Reason for delay if established goals were not met.
- Additional pertinent information including, when appropriate, analysis and explanation of cost overruns or high unit costs.

Explanations are provided for changes or incomplete deliverables. A federal financial report is submitted separately from the Office of Sponsored Programs at Colorado State University to the Southwest Regional Office.

Project 1: Supporting Collaborative Forest Landscape Restoration Projects

Project components:

- Coordinating the implementation and adaptive management of the multi-party monitoring plan for the Front Range Collaborative Landscape Restoration Program (in collaboration with Paula Fornwalt and Mike Battaglia, Rocky Mountain Research Station)
- Coordinating the implementation and adaptive management of the multi-party monitoring plan for the Uncompahgre Plateau Collaborative Forest Landscape Restoration Project
- Provide field-based assessments and trainings for federal and non-federal forest land and wildfire risk managers concerning new monitoring approaches and knowledge produced by the Collaborative Forest Landscape Restoration projects

Supporting Collaborative Forest Landscape Restoration Projects	
Proposed Project Deliverable	**Actual Project Deliverable**
One updated adaptive	Completed the technical report entitled, “Colorado Front

management reports to review the treatment results based on the 2014 ecological and socio-economic monitoring results for the Front Range Collaborative Forest Landscape Restoration Project.	Range Collaborative Forest Landscape Restoration Project: ecological monitoring of treatment effects on stand structure and fuels through 2013" (Available online at: http://coloradoforestrestoration.org/wp-content/uploads/2014/11/FR_CFLRP_EcologicalMonitoringReport2013_Final1.pdf). This report is a product of the collaborative adaptive management process of the Front Range CFLR. Primary contact: Mark Martin, Arapaho-Roosevelt NF and Pawnee NG and Sara Maybe, Pike-San Isabel NF and Cimarron-Comanche NG.
One updated adaptive management reports to review the treatment results based on the 2014 ecological and socio-economic monitoring results for the Uncompahgre Collaborative Forest Landscape Restoration Project.	Completed the technical report entitled: "Uncompahgre Mesas Project Area 2015 Monitoring Report" (Available online at: http://coloradoforestrestoration.org/wp-content/uploads/2015/11/2015_MonitoringSummaryReportFINAL.pdf) Completed the technical report entitled: "Reconstructing late-1800's landscapes of the Uncompahgre Plateau using the General Land Office surveys" (Available online at: http://coloradoforestrestoration.org/wp-content/uploads/2015/11/2015-Annual-Meeting-GLO-Handout.pdf) Completed the monitoring report entitled: "Colorado Uncompahgre Plateau Collaborative Forest Landscape Restoration project: 2013 socio-economic monitoring report" (Available online at: http://coloradoforestrestoration.org/wp-content/uploads/2015/11/2014-UP-CFLR-2013-Social-Economic-Monitoring-Report.pdf) (For CY2014, the collaborative agreed to only collect socio-economic monitoring data and conduct an analysis in 2020 of the composite six-year dataset) Primary contact: Tammy Randall-Parker, Ouray District Ranger, and Clay Speas, CFLR coordinator for the GMUG NF.
At least two (2) field-based workshops per CFLR project to review and deliberate treatment effects and desired conditions	1) Co-organized and –sponsored a multi-stakeholder field workshop to the Uncompahgre Plateau July 10-11 and September 12-13, 2015 to visit the Uncompahgre Mesas Forest Restoration treatment areas. Attended by over 20 individuals from federal and state agencies, research institutions, industry, and non-governmental organizations. Primary contact: Tammy Randall-Parker, District Ranger, Ouray Ranger District. 2) Co-organized and –sponsored a multi-stakeholder field

	workshop to Colorado Front Range CFLR project sites on the Arapaho-Roosevelt NF, July 8, 2015 and the Pike National Forest, August 12, 2015. Attended by over 30 individuals from federal and state agencies, research institutions, industry, and non-governmental organizations. Primary contacts: Sara Mayben, Renewable Resources Staff Officer, Pike-San Isabel National Forest, and Mark Martin, Acting Ecosystem Staff Officer, Arapaho-Roosevelt NF and Pawnee NG.

No cost over-runs are reported for Project 1.

Project 2: Addressing Knowledge Needs for Post-Bark Beetle Forest Recovery

Project components:

- Assist efforts to prioritize and assess the effects of post-bark beetle forest treatments
- Expand opportunities to link managerial monitoring of forest recovery and management effects with RMRS post-outbreak research on forest recovery and management effects

Supporting Post-Bark Beetle Future Forest Planning, Analysis, and Monitoring	
Proposed Project Deliverable	**Actual Project Deliverable**
A science-based understanding about the consequences of no management actions vs. forest management actions on future forest structure and other environmental impacts	In June 2015, CFRI initiated participation in the adaptive implementation of the Spruce Beetle Epidemic-Aspen Decline Management Response (SPEADMR) on the Grand Mesa, Uncompahgre, and Gunnison National Forest. CFRI has entered into an agreement with the RMRS to be a member of the "Science Team" that will provide science-based information to the SPEADMR effort. CFRI is finalizing a literature review of spruce management effects; CFRI cost-shares this work with RMRS with $31,086 in unrecovered indirect costs.
A science-based understanding of the range of potential effects of post-bark beetle forest treatments in western Colorado	CFRI and RMRS have established a monitoring plan to assess the effects of spruce salvage activities on tree regeneration, plant response, and fuel loading. The monitoring will be ongoing.
Compile, synthesize, and disseminate current	CFRI and RMRS have established a monitoring plan to assess the effects of spruce salvage activities on tree

knowledge about potential fire hazards associated with bark beetle outbreaks and post-outbreak treatments	regeneration, plant response, and fuel loading. The monitoring will be ongoing.

No cost over-runs are reported for Project 2.

Project 3: Assessing Treatment Effectiveness

Project components:

- Analyze currently available information on restoration and hazard reduction treatments relative to desired conditions.

Assessing Treatment Effectiveness	
Proposed Project Deliverable	**Actual Project Deliverable**
Between 1-3 field-based workshops to review and deliberate treatment effects and desired conditions	Field review of treatments in Upper South Platte watershed project, July 29, 2015 with Colorado State Forest Service, Jefferson Conservation District, and Natural Resource Conservation Service. Contact: Mike Lester, Colorado State Forest Service and Jonas Feinstein, Natural Resource Conservation District.
Between 1-3 written reports on current available evidence or scientific research on treatment effectiveness on wildland fire behavior	Completed the technical report entitled: "Changes in forest structure and fire behavior on the Unc Mesas Restoration project: results from a stem-map inventory and physics-based fire behavior modeling" (Available online at: http://coloradoforestrestoration.org/wp-content/uploads/2015/11/2015_UP-CFLR-Forest-Structure-and-Fire.pdf)

No cost over-runs are reported for Project 3.

Project 4: Supporting Collaborative Capacity-Building

Project components:
• Current information on biophysical and social science pertaining to forest restoration and fuel reduction

• Current analysis and interpretation on policies and programs pertaining to forest restoration and fuel reduction
• Coordinate and facilitate learning within and between place-based forest collaboratives

Supporting Collaborative Capacity-Building	
Proposed Project Deliverable	**Actual Project Deliverable**
Between 1-3 site visits or workshops that bring together research scientists from RMRS, other federal agencies, and universities with participants of individual place-based forest collaboratives to transfer knowledge about, and assist in the development of, science-based methods for multi-party monitoring	Field trip to new Upper South Platte Partnership project, February 9, 2015 with Denver Water, Jefferson Conservation District, and Natural Resource Conservation Service Contact: Jonas Feinstein, State Forestry Lead, Natural Resource Conservation District Field review of treatments in Pagosa Springs area, May 21, 2015 with San Juan Headwaters Forest Health Partnership. Contact: Aaron Kimple, Coordinator, SJHFHP and Mountain Studies Institute. Published a peer-review analysis of the Front Range Collaborative Forest Landscape Restoration project: "Cheng, A.S., A.K. Gerlak, L. Dale, and K.M. Mattor. 2015. Examining adaptability of collaborative governance in public ecosystem management: insights from the Front Range Roundtable, Colorado, USA. *Ecology and Society* 20(1): 35. http://dx.doi.org/10.5751/ES-07187-200135
Between 1-3 site visits or workshops that bring together research scientists from RMRS, other federal agencies, and universities with participants of multiple place-based forest collaboratives to identify common knowledge gaps, compare results from common multi-party monitoring approaches, and develop strategies to link multi-party monitoring approaches with research programs.	The planned annual workshop of Colorado's place-based forest collaboratives scheduled for late October 2014 was cancelled due to lack of interest and capacity.

No cost over-runs are reported for Project 4.