CFLR Project: ***Amador Calaveras Consensus Group (ACCG) Cornerstone (CFLR015)***
National Forest(s): Eldorado and Stanislaus National Forest

1. Match and Leveraged Funds:

a. FY19 Matching Funds Documentation

Fund Source – (CFLN/CFLR Funds Expended)	**Total Funds Expended in FY 2019**
Core Funds **BLI / Program** **Eldorado** **Stanislaus** CFLN $846,531 $829,717 **Total $1,676,248**	**Core Funds** CFLN **Total $1,676,248**

Fund Source – (Funds expended from Washington Office funds (in addition to CFLR/CFLN)	**Total Funds Expended in FY 2019**
Core Funds **BLI / Program** **Eldorado** **Stanislaus** NFHF $458,851 $359,228 **Total $818,079**	**Core Funds** CFLN $1,676,248 NFHF $818,079 **Cornerstone Total** **$2,494,327**

Fund Source – FS Matching Funds	**Total Funds Expended in FY 2019**
Match Funds **BLI / Program** **Eldorado** **Stanislaus** NFTM $193,437 NFWF $138 RIRI $118,833 **Total $312,408**	**Match Funds** NFTM $193,437 NFWF $138 RIRI $118,833 **Cornerstone Total** **$312,408**

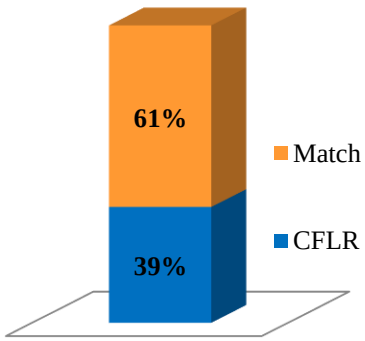
List and description of Budget Line Item (BLIs) used in this report

BLI	Description	BLI	Description
CFLN	Collaborative Forest Landscape Restoration	NONE	
CMXN	Recreation Reimbursable agreements	PTNR	Partner Funds
NFHF	Hazardous Fuels Reduction	RIRI	Restoration of Improvements on Forest Lands
NFRW	Recreation, Heritage, and Wilderness	SSCC	Stewardship Contracting
NFTM	Forest Products	SSSS	Timber Salvage Sales
NFWF	Wildlife and Habitat Management	WFPR	Wildland Fire Preparedness Activities

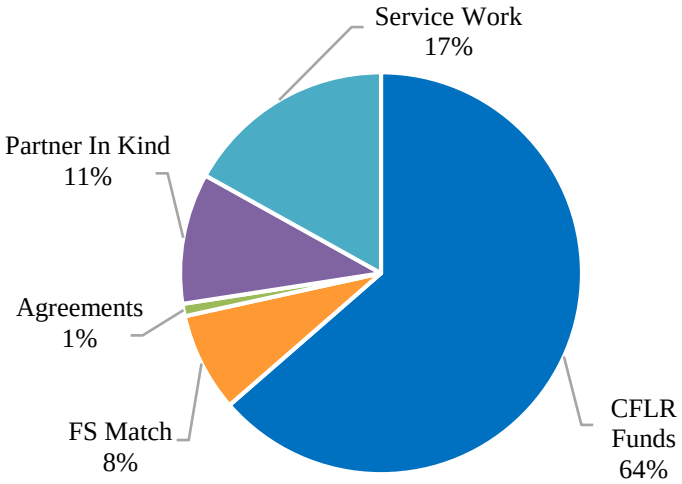
Fund Source – (Funds contributed through agreements)	**Total Funds Expended in FY 2019**
• PG&E Noxious Weeds - $10,000	$10,000
Fund Source – (Partner In-Kind Contributions)	**Total Funds Expended in FY 2019**
• Amador Calaveras Consensus Group - $74,550 • Calaveras Healthy Impact Product Solutions - $57,060 • Upper Mokelumne River Watershed Authority - $75,000 • Sierra Institute for Community and Environment - $4,575 • Institute for Bird Populations - $36,164 • National Fish and Wildlife Foundation - $78,207 • American Conservation Experience - $3,800 • Eastern Sierra Conservation Corps - $11,000 • Arnold Rim Trail Association - $27,363 • Vallecito Conservation Camp - $24,413 • Calaveras Ranger District OHV Volunteers - $10,325 • Joaquin Jeepers - $5,188 • Espirit de Four - $2,594 • Railtown Off-Road Club - $2,441	$412,680

Service work accomplishment through goods-for services funding within a stewardship contract	**Total**
For Contracts Awarded in FY 2019:	
Total revised non-monetary credit limit for contracts awarded in FY 2019 ○ Panther Stewardship Project - $327,764 ○ Scottiago Stewardship Project - $334,920 ○ Pumpkin Hollow Stewardship - $841	$663,525

Cornerstone 2012-2019 Total (%)



Cornerstone FY 2019 Funding



b. Please fill in the table describing leveraged funds in your landscape in FY2019. Leveraged funds refer to funds or in-kind services that help the project achieve proposed objectives but do not meet match qualifications.

During the Fiscal Year 2019, approximately **$518,143** was leveraged by the Amador Calaveras Consensus Group (ACCG) from in-kind services, restoration treatments, and capacity building that helped achieve ACCG and Cornerstone project goals and objectives.

Description of Item	Where Activity/Item is Located or Impacted Area	Estimated Total Amount	Forest Service or Partner Funds?	Source of Funds
In-kind Services; workgroups and meetings, web oversight, grant and letter writing	CFLR all-lands landscape within Cornerstone Project Area	$22,055	Partner Funds	ACCG
Salmon habitat restoration project, Cosumnes water rights research, Project 137 ecological resources committee participation, watershed education and grant writing, annual Mokelumne River Cleanup, Integrated Regional Water Management Plan participation.	CFLR all-lands landscape within Cornerstone Project Area	$15,928	Partner Funds	Foothill Conservancy
Amador Fire Safe Council: Fuel reduction and wildfire protection	PG&E ingress/egress on private, residential roads and public education	$75,000	Partner Funds	PG&E
Amador Fire Safe Council: Fuel reduction and wildfire protection	Tiger Creek Fuel Break and Watershed Protection	$100,000	Partner Funds	Sierra Nevada Conservancy
Tiger Creek – NEPA to complete 264 acres of planned handwork and mastication	CFLR all-lands landscape in Amador County	$1,800	Partner Funds	Bureau of Land Management
Sandy Gulch – 75 acres cut and piled	CFLR all-lands landscape in Calaveras County	$70,464	Partner Funds	Bureau of Land Management
Mitchel Mine – shaded fuel break 97 acres cut and chipped	CFLR all-lands landscape in Amador County	$9,896	Partner Funds	Bureau of Land Management
Lily Gap II – 207 acres of fuel reduction, timber, biomass stewardship	CFLR all-lands landscape in Calaveras County	$117,000	Partner Funds	Bureau of Land Management
BLM, South Fork Mokelumne Project – 300 acres of fuels reduction, timber, biomass	CFLR all-lands landscape in Calaveras County	$106,000	Partner Funds	Sierra Nevada Conservancy

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*.

The *Comprehensive Strategy Implementation Plan* focuses on building collaborative relationships with local, State, Regional, Tribal and National interests. The U.S. Forest Service is working with ACCG, in which the Fire Safe Councils are active participants, to provide a foundation to meet performance measures in the future. Fuel treatments conducted in FY 2019 within the Cornerstone project area are expected to reduce the extent and intensity of future wildfires within the Wildland Urban Intermix (WUI). Hazardous fuels have been greatly reduced in the project area adjacent to communities at risk.

FY2019 Overview

FY19 Activity Description (Agency performance measures)	Acres
Number of acres treated by prescribed fire	1,011
Number of acres treated by mechanical thinning	12,774
Number of acres of natural ignitions that are allowed to burn under strategies that result in desired conditions	0
Number of acres treated to restore fire-adapted ecosystems which are maintained in desired condition	248
Number of acres mitigated to reduce fire risk	13,466

Expenditures

Category	$
FY2019 Wildfire Preparedness	N/A
FY2019 Wildfire Suppression	N/A
The cost of managing fires for resource benefit if appropriate (i.e. full suppression versus managing)	$0
FY2019 Hazardous Fuels Treatment Costs (CFLN)	$99,350
FY2019 Hazardous Fuels Treatment Costs (other BLIs)	$61,250

2a. Please provide a narrative overview of treatments completed in FY19, 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?

Amador Ranger District:
Mechanical fuels reduction and prescribed fire were delayed at the beginning of FY 2019 due to dry conditions and elevated fire potential. After fire crews returned from the Camp Fire, we began aggressively burning our backlog of mechanical and hand fuel piles. These prescribed burns were along Highway 88 in the View 88 project, which is all WUI and a roadside/ridgetop fuel break that had been initiated in the last 2 years. In addition, fuel piles from the Power Fire Reforestation site preparation for planting were also a high priority to enable planting in spring. Following the December – January furlough, burning operations continued on both of these projects as well as burning landing piles in the Callecat project area. As the snow melted, we underburned in the Power Fire scar between snow drifts and completed 148 acres of underburning. Mechanical fuels reduction operations began under a new NEPA decision (Scottiago Fuels Reduction CE) and 250 acres of roadside fuel break (mastication and cut/limb/chip) were completed. We also completed significant amounts of fuel reduction along Panther Ridge (300 acres are now in a fuel break maintenance condition), Salt Springs

road (671 acres roadside fuel break; cut/limb/chip; Tiger Salt Deck Sale). Thousands of acres were mechanically thinned and piled for burning in the Copycat and Foster Firs project areas.

Calaveras Ranger District:
The employees on Calaveras RD worked closely together with CAL FIRE, Upper Mokelumne River Watershed Authority (UMRWA), Calaveras Healthy Impact Product Solutions (CHIPS), and Mule Deer Foundation early in the fiscal year in forming a plan for leveraging work and resources across the landscape. Elevated fire danger reduced the opportunity for early fall prescribed fire. Working together with partners has allowed the Calaveras District to increase pace and scale over time by first establishing agreements, but then following up with building relationships based on shared values, trust and competence which adds to increased capacity for everyone involved. As contracts and projects create lessons learned, so does each partner improve their own efficiencies. Three key enabling factors that allow us to accomplish an increased pace and scale of treatments completed besides the initial CFLR support are shared values, strong relationships, and open channels of communication across a network of partners and stakeholders involved. Individual partners that work for different agencies under different missions are now working together for the common goal of a resilient landscape and reduced fire severities. Local infrastructure is being invested in and capacity increases as local contractors recognize sustainable opportunities in working with various agencies all working together to treat an increased amount of land over time.

The Stanislaus National Forest has been working collaboratively with the Amador-Calaveras Consensus Group, Yosemite Stanislaus Solutions, the Dinkey Collaborative, and the Sierra National Forest on a large-landscape project. The project is currently being developed to create a more resilient landscape and address the need to increase the pace and scale of treatment across both national forests. Engagement is ongoing, and both the Forests and collaboratives are working towards a solution that will provide the best path for success.

2b. How was this area prioritized for treatment? What kinds of information, input, and/or analyses were used to prioritize?

Highway 88, a major east-west State highway along a main ridgeline, is a primary fuel break for Amador Ranger District. The entire area is within Wildland Urban Interface (WUI) Defense. Other fuels treatments anchor off Highway 88 (for example, the Omo Ranch Road shaded fuelbreak) which is needed to enable prescribed burning of larger areas.

Ongoing project implementation often require fuels maintenance to achieve desired conditions. For example, the Power Fire Reforestation project has site preparation piles that need to be burned to enable Spring planting. Additionally, the Foster Firs timber sale included service contract non-commercial thinning work that also created piles which require to be burned or otherwise removed. Ongoing project implementation is a priority for fuels treatment to avoid a backlog of work over time.

The Mokelumne Watershed Avoided Cost Analysis was used to guide treatment objectives (link to report, below). Further, all treatments listed above are in high or very high wildfire hazard areas as well as near communities, high use recreation area, and near power and water infrastructure developments.

2c. 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?

In 2014, The Nature Conservancy, Sierra Nevada Conservancy, and the US Forest Service completed the Mokelumne Watershed Avoided Cost Analysis. https://sierranevada.ca.gov/mokelumne-watershed-analysis/

Both the Amador and Calaveras Ranger Districts experienced a less severe FY 2019 fire season as compared to FY 2018 (14.25 acres) and FY 2017 (85.5 acres), with 10 fires on both districts totaling approximately 3.3 acres. Except for one unknown, all the fires were caused by human activity.

Fires that Occurred in the Cornerstone Project Area in FY 2019					
Calaveras Ranger District			**Amador Ranger District**		
Fire Name	**Date**	**Acres**	**Fire Name**	**Date**	**Acres**
Pacific	10/01/2018	0.10	Gate	10/04/2018	0.10
Whittakers	10/27/2018	2.00	Caples	10/15/2018	0.10
Moran	07/14/2019	0.25	Cat	07/29/2019	0.25
Gann's	09/11/2019	0.20	Bear	08/05/2019	0.10
			Thunder	08/20/2019	0.10
			Lower	09/02/2019	0.10
District Total Acres		**2.55**	**District Total Acres**		**0.75**

Cause	Number of Fires	Acres Burned
Human Caused	7	0.95
Human Caused/Target Shooting	1	0.25
Campfire	1	0.10
Unknown	1	2.00

Fire Cameras

The Eldorado and Stanislaus National Forests, and neighboring communities have multiple cameras integrated into their Fire Camera Network. There are currently six fire cameras operational with two more expected to go online in FY20* in the Cornerstone Project area. These fire cameras serve multiple benefits to increase fire protection such as faster detection of wildland fires, 24-hour monitoring of wildland fires and prescribed fires, and district staff can monitor an area to detect fires and greatly reduce response time. The Alert Wildfire camera system can viewed at http://www.alertwildfire.org/tahoe/

Cornerstone Project Area Fire Cameras	
Walker Ridge/North Mokelumne	West Point
Leek Springs	Red Corral
Omo Ranch 1	Armstrong Hill 1*
Omo Ranch 2	Armstrong Hill 2*

Leek Springs Fire Camera allows Fire Officials and public to detect and monitor smoke south of the lookout.

3. **What assumptions were used in generating the numbers and/or percentages you plugged into the TREAT tool**?

Part-time and full-time jobs and labor income estimates were derived from local records using the following assumptions:

Description	CFLR/N Funds Only	All Funds (CFLR/N and Match)
Funding and Employment		
Total Funding	$2,494,327	$2,806,735
Percent of Funding used for Contracted Work	33%	3%
Percent of Funding used for Force Account Implementation and Monitoring	46%	48%
Annual Force Account FTEs for Implementation and Monitoring	18	22
Contract Funding Distribution		
Equipment intensive - (No Commercial Products). Includes chipping in the woods and mechanical treatments such as non-commercial logging, mastication. Grapple piling. Excavator work, tree-tipping, etc.	1%	1%
Labor intensive - (No Commercial Products). Includes labor intensive, simple mechanical treatments such as thinning with chain saws, hand piling, prescribed burning, tree planting, etc.	87%	85%
Material-Intensive Work - (No Commercial Products). Projects where materials represent a significant portion of project costs. Includes road work, culvert replacement, in-stream restoration, fence construction, some trail work, etc.		
Technical Services - (No Commercial Products). Includes stand exams, marking, layout, biological surveys, cultural surveys, invasive weed spraying, etc.		2%
Professional Services - (No Commercial Products). Includes studies completed by scientists, engineering design, acquisition or analysis of remotely-sensed data, scientific modeling, workshops, etc.	12%	12%
Contracted Monitoring (Does not include in-kind and volunteer contributions)		
Amount of Harvest Volume		
CCF (100 cubic feet)	19,457	19,457
MBF (1000 board feet)		
Dry Tons		1,987
Cords		
Product Distributions		
Sawmills and Wood Preservation	98%	77%
Veneer and Plywood Manufacturing		
Oriented Strand Board		3%
Roundwood for pulp, paper, paperboard, paperboard container mills		
Roundwood for Biomass Energy Plant Small		
Roundwood for Biomass Energy Plant Large		15%
Other Timber Products - Post and Pole		
Other Timber Products - not elsewhere classified		
Other Timber Products -Miscellaneous		
Other Timber Products -Engineered		
Firewood (Commercial)		
Firewood (Home Use)	2%	5%

FY 2019 Jobs Supported/Maintained (FY19 CFLR/CFLN/ WO funding):

Project Type	Jobs - Full and part-time		Labor Income (2019 Dollars)	
	Direct	Total	Direct	Total
Timber harvesting component	30	39	1,615,981	1,872,050
Forest and watershed restoration component	12	14	172,899	284,312
Mill processing component	34	66	2,089,554	3,673,281
Implementation and monitoring	21	25	832,265	967,413
Other Project Activities	0	0	0	0
TOTALS:	**97**	**145**	**4,710,699**	**6,797,057**

FY 2019 Jobs Supported/Maintained (FY19 CFLR/CFLN/ WO and matching funding):

Project Type	Jobs - Full and part-time		Labor Income (2019 Dollars)	
	Direct	Total	Direct	Total
Timber harvesting component	32	43	1,753,450	2,031,302
Forest and watershed restoration component	1	2	20,025	32,994
Mill processing component	30	59	1,830,879	3,218,748
Implementation and monitoring	26	30	977,221	1,135,909
Other Project Activities	0	0	0	0
TOTALS:	**89**	**133**	**4,581,575**	**6,418,953**

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?**

The Cornerstone collaborative identified the following community benefits from FY 2019:

- Developed a 5-year Strategic Plan to promote a productive and sustainable future for ACCG.
- Reduced the risk of uncharacteristic fire that could harm people and property.
- Increased public awareness of restoration efforts in the Cornerstone all-lands planning area.
- Increased participation of local Tribes in forest management activities.
- Leveraged investment from other federal, state, and private sources.
- Involved diverse community members in project planning, implementation, and monitoring.
- Attracted regional attention as a model for community forest collaboration.
- Promoted open discussion of forest issues related to ACCG goals through on-the-ground projects.
- Provided opportunities for community learning through project field trips.
- Represented ACCG with statewide collaborative groups as part of the annual SCALE (Sierra to California All Lands Enhancement) meeting.

Locally contracted fuels reduction work in the South Fork Mokelumne Project.
Photo by Bureau of Land Management

Indicator	Brief Description of Impacts, Successes, and Challenges	Links to reports or other published materials (if available)
Responses to surveys about collaboration conducted locally	*Sierra Institute for Community and Environment:* worked with ACCG and community to draft Socioeconomic Monitoring Report.	https://sierrainstitute.us/program/socioecomonitoring/
Project partnership composition	*California Fire Safe Council:* leveraged investment from other federal, state, and private sources.	http://www.amadorfiresafe.org/ http://www.calaverasfiresafecouncil.org/
Relationship building/collaborative work	*Amador Calaveras Consensus Group:* continued and expanded collaboration and communication.	http://acconsensus.org/
Preserving cultural heritage of sites/resources	*Calaveras Healthy Impact Product Solutions:* put local Native Americans to work restoring traditional cultural sites.	http://www.calaveraschips.org/contact.html

CHIPS Local Community Impact

Provided by Steve Wilensky, CHIPS Board Chair

Calaveras Healthy Impact Product Solutions (CHIPS) is a 501c3 non-profit organization devoted to employing at risk individuals in forest, meadow, cultural site, wildlife habitat, and watershed restoration projects. In addition, CHIPS works on fuel reduction and fire breaks in the wild land-urban interface. CHIPS helped write the Cornerstone CFLRP proposal which resulted in the last 8 years of project funding in the Stanislaus and Eldorado National Forests. Prior to the funding, CHIPS had 5 employees and an all-volunteer administration. All the work was on private land in Calaveras County. Contracts were sporadic and employment seasonal.

During the 2019 season, CHIPS employed as many as 47 workers and administrative staff in service to the Eldorado, Stanislaus, and Tahoe National Forest, BLM, Yosemite National Park, the Amador Fire Safe Council, and numerous private contracts ranging from large ranches to individual lots and door to door chipping endeavors. Over 70% of CHIPS's leadership and staff are of Native American heritage from the Washoe, Paiute, and Miwuk tribes.

As it turns out, forest restoration and community restoration are closely linked. The entire Washoe Nation supports this workforce in the kind of ways that produce this kind of outcome. A tribal elder accompanies the workforce and helps troubleshoot and resolve personal issues which arise from time to time. He also has been instrumental in developing and mentoring young leaders and promoting safety practices along with a strong work ethic.

None of this year's CHIPS work could have occurred without the CFLRP funding. In fact, CHIPS itself could not have survived, let alone expanded over the last 8 years without it. Here are a few of the projects CHIPS has been involved in during 2019:

Stanislaus National Forest

- Cleaned up and reduced fuel load in the Alpine Lake Campground
- Continued work on the Tamarack Fuel Break

Eldorado National Forest

- Completed close to 20 miles of fuel break on the View 88 project
- Prepared adjacent land for USFS prescribed fire

Lake Tahoe Basin

- Fuel reduction work on West Shore WUI units (37 acres)
- Brushed and mitigated hazard trees along 5.1 miles of trails
- Treated 220 acres of invasive plants over 5 different noxious weed sites
- 3 acres of Aspen restoration work
- Post-burn rehabilitation at Baldwin Meadow recreation site

Yosemite National Park

- The crew worked in Yosemite Valley and Tuolumne Meadows on a wide range of restoration projects:
- De-commissioning social trails leading into Sacred Cultural Sites, restoring meadows, removing invasive species, reducing fuel loads, planting native species, and picking apples before the bears become attracted to them.

Humboldt-Toiyabe National Forest

- Developed and signed a Participation Agreement for fuels reduction work on the Carson City Ranger District.

Tribal Agreements

- Renewed agreements with the Washoe Tribe of California and Nevada and The Mariposa Indian Council, negotiated a new workforce development agreement with the Big Sandy Mono Tribe.

Wilseyville Biomass Plant

- CHIPS received and chipped over 200 tons of biomass at the Wilseyville site.
- The 3MW Wilseyville Biomass Plant achieved a power purchase agreement and an interconnection agreement with Pacific Gas and Electric but investments are on hold due to the bankruptcy. Buildout now anticipated up to 2 years hence. Meanwhile CHIPS has received the go-ahead to begin processing soil amendments and other biomass products during the interim.

Training

- CHIPS conducted 3 CPR, 3 First Aide, 3 S212, and a Basic 32 and Red Card Trainings this year.
- There will be additional fire training during late 2019 and early 2020.
- CHIPS hopes to qualify 20 staff to help with prescribed burning in the coming year.

Grant Writing

- CHIPS, in coordination with the Stanislaus and Eldorado Forests and the Upper Mokelumne River Watershed Authority, is working on a number of grant applications. We have just been notified that we have been awarded a $2.2 million-dollar grant for work in the Eldorado NF.
- In addition, CHIPS is serving as the fiscal agent for the ACCG forest collaborative and for several hundred acres of work on BLM lands. CHIPS has received a workforce development grant to do outreach and training for several Native American Tribes.

As previously stated, none of this work would have occurred without the investment inherent in the CFLR. The two recipient forests have taken their obligation under the act to provide local benefit seriously. They have been patient in allowing CHIPS its growing pains and have recognized the challenges in restoring impoverished rural communities while addressing complex forest prescriptions and navigating the difficult processes incumbent in a 10-year-old diverse collaborative. I hope there is a high level of recognition back east for our National Forest partners in allowing and encouraging the accomplishments outlined above to take place.

5. Based on your project monitoring plan, describe the multiparty monitoring process.

The ACCG Collaborative has a team with diverse knowledge, technical resource skills, planning expertise, and perspectives on forest restoration and community conditions actively defining and implementing the Cornerstone Monitoring Strategy. This monitoring team includes a variety of USDA Forest Service staff, representatives from environmental and non-profit organizations, and the forest products industry. The monitoring strategy describes what will be monitored, how to conduct the monitoring, how the monitoring results will be used, and the responsible party for each step in the process. The monitoring strategy provides guidance in:

- Determining if restoration projects are implemented in accordance with the project design and intent.
- Determining if the outcomes and effects of restoration actions are achieving desired conditions.
- Identifying whether the restoration treatments need to be modified to accommodate results of monitoring.

The following table identified what is being monitoring and what parties are involved in monitoring. Broad monitoring results can be found in the 2019 Ecological Indicator report. In addition, all ecological monitoring for the ACCG that has been summarized to date can be found on the SCALE (Sierra to California All Lands Enhancement) website on their ecological monitoring page: https://scale.sierrainstitute.us/ecological-monitoring/

Current Monitoring Efforts within the Cornerstone Project Area			
Monitoring Project	**Perspective**	**Discipline**	**Responsible Party**
Social/Economic Monitoring	Social Economics	Social Economics	Sierra Institute, Stanislaus and Eldorado NF, ACCG
Mixed Conifer Monitoring - Project Effectiveness - Caples, Hemlock, Panther	Ecological Effectiveness	Conifer Forest, Fire and Fuels	UC Davis, USFS Region 5 Ecology
Restoring services provided by mature California black oak in the Power Fire	Ecological Effectiveness	Hardwoods	USFS Pacific Southwest Research Station
Planning and Implementation of Prescribed Burns in the Power Fire	Ecological Effectiveness	Conifer Forest, Fire and Fuels	USFS Pacific Southwest Research Station, UC Berkeley
Identifying desired conditions for plantation management and providing tools to identify planting and thinning techniques to reach desired conditions	Ecological Effectiveness	Conifer Forest, Fire and Fuels, Other	USFS Pacific Southwest Research Station, University of Michigan
Inventory and monitoring of post fire forest succession in the Power Fire area, including comparison of treated and untreated areas	Ecological Effectiveness	Conifer Forest	UC Davis
Western bumble bee distribution and management in the Power Fire area.	Ecological Effectiveness	Terrestrial Wildlife	Institute of Bird Populations
Using birds to effectively monitor the ecological restoration of post fire	Ecological Effectiveness	Terrestrial Wildlife	Point Blue
Monitoring of birds and bats in the Power Fire: ecological implications for post-fire restoration	Ecological Effectiveness	Terrestrial Wildlife	UC Davis, Point Blue

Current Monitoring Efforts within the Cornerstone Project Area			
Monitoring Project	**Perspective**	**Discipline**	**Responsible Party**
Bales Snow Study	Ecological Effectiveness	Watershed	UC Merced
Red Fir Vegetation Management Monitoring	Ecological Effectiveness	Conifer Forest	UC Davis, USFS Region 5 Ecology
California Department of Water Resources	Ecological Effectiveness	Watershed	CA State
USGS Stream Flow Data	Ecological Effectiveness	Watershed	USGS
ACCG Collaborative Monitoring Survey	Collaboration	Other	Region 5 Ecology, ACCG members
Forest Treatment Effectiveness for Reducing Tree Mortality	Ecological Effectiveness	Conifer Forest	USFS Region 5 Ecology, ENF, SNC
Forest Inventory Analysis - FIA	Ecological Effectiveness	Conifer Forest	USFS
Edart - change detection for monitoring mortality	Ecological Effectiveness	Conifer Forest	USFS RSL
Post implementation field trip implementation monitoring	Implementation	Other	USFS Region 5 Ecology, ENF, SNC, ACCG members
Caples Creek - Aspen Monitoring	Ecological Effectiveness	Hardwoods, Riparian	USFS Region 5 Ecology, ENF, SNC
R5 Range Monitoring - vegetative trend transects meadows	Ecological Effectiveness	Riparian	USFS Region 5 Ecology, ENF, SNC
BMP Monitoring Database - FS National	Implementation		USFS Region 5 Ecology, ENF, SNC
Effectiveness of conifer removal in meadows	Ecological Effectiveness	Riparian	USFS Region 5 Ecology, ENF, SNC, ACCG members
Travel Management Implementation Monitoring - ENF	Implementation	Other, Soils	Eldorado NF
Ongoing Sensitive Plant Monitoring	Ecological Effectiveness	Sensitive Plants	Eldorado NF Stanislaus NF
Ongoing Invasive Plant Treatment Monitoring	Ecological Effectiveness	Invasive Species	Eldorado NF Stanislaus NF
ENF Amador District Annual Invasive Plant Surveys	Ecological Effectiveness	Invasive Species	Eldorado NF
Power Fire Reforestation	Ecological Effectiveness	Conifer Forest	Eldorado NF
Design by Prescription Implementation Monitoring - Cabbage	Implementation	Conifer Forest	Stanislaus NF
Caples Watershed Avian Monitoring	Ecological Effectiveness	Conifer Forest, Terrestrial Wildlife	Eldorado NF

Current Monitoring Efforts within the Cornerstone Project Area			
Monitoring Project	**Perspective**	**Discipline**	**Responsible Party**
Meadow Restoration Hydrology Monitoring Study	Ecological Effectiveness	Watershed	Plumas Corporation Stanislaus NF
STF Sensitive bat species survey	Ecological Effectiveness	Wildlife	Stanislaus NF
Biochar Research Study	Ecological Effectiveness	Soils	Rocky Mountain Research Station

Socioeconomic Monitoring with Sierra Institute for Community and Environment

In 2018, the ACCG, in partnership with the Sierra Institute for Community and Environment (Sierra Institute), began work to assess the status and trends of the socioeconomic conditions in the Cornerstone Project area. This work will help the Eldorado and Stanislaus National Forests and the ACCG understand how landscape management affects local communities and contributes to socioeconomic conditions. The ACCG worked with Sierra Institute through an in-person workshop to review and refine the ACCG's socioeconomic monitoring matrix that outlines appropriate objectives, questions, and indicators for socioeconomic monitoring. Initial data collection began in FY 2018, including both collection of quantitative data (e.g., census data) and qualitative data through a community workshop and interviews with community members recommended by the ACCG Socioeconomic Monitoring Work Group. A survey of contractors active in the Cornerstone Project area was also conducted. Several themes, including the Butte Fire, the cannabis industry, and the tree mortality outbreak, have emerged as potentially important factors in understanding socioeconomic conditions from these initial conversations.

FY 2019 Accomplishments - Sierra Institute and ACCG Socioeconomic Monitoring:

- Socioeconomic Monitoring Community Interviews

  Sierra Institute made three visits to the Cornerstone area to conduct 40 interviews within the local community between November 2018 and May 2019.

- ACCG Socioeconomic Work Group

  Sierra Institute met with the ACCG Socioeconomic Work Group to review preliminary data and findings for the Socioeconomic Monitoring Report.

- Socioeconomic Monitoring Report

  Sierra Institute analyzed data and synthesized findings into a draft report and presented to the ACCG at the September 2019 meeting.

Published Research and Graduate Thesis

Funded through the Power Fire Settlement, the studies listed below have potential to help guide restoration and management efforts within the Cornerstone Project and at other fire restoration areas within the Sierra Nevada.

Richter, CM. Rejmanek, J. E. D. Miller, K. R. Welch, J. Weeks, and H. Safford. 2019. The species diversity × fire severity relationship is hump-shaped in semiarid yellow pine and mixed conifer forests. Ecosphere 10(10). https://doi.org/10.1002/ecs2.2882

Allen, Iris C., "Evaluating Post-Fire Plantation Restoration in a Mixed Conifer Forest in the Sierra Nevada" (2019). *Graduate Theses, Dissertations, and Problem Reports*. 4091. https://researchrepository.wvu.edu/etd/4091

Three Meadows Restoration – Monitoring and Conifer Removal

In FY 2018, restoration of Upper Onion Valley meadow included removal of conifers that have encroached on the meadow. To evaluate the effectiveness of conifer removal as a restoration technique, ACCG and the US Forest Service monitored Upper Onion Valley using vegetation transects. In 2019, conifers were removed by volunteers at Upper Onion Valley, High Onion and Tyler meadows. All restoration actions are expected to be completed in 2021. Post-implementation monitoring at Upper Onion Valley will be conducted one year and five years post-implementation.

Conifer Removal Results

The meadow footprints of all three meadows were treated during FY19 where conifers were cut from over 18 acres of meadow habitat. For Upper Onion Valley, this was a second treatment, as it was plucked initially in September 2018. In 2019, portions of the meadow boundaries of Tyler and Upper Onion Valley were treated where conifers nearest the meadow footprints formed dense thickets. Both Tyler and Upper Onion Valley abut roads popular with OHV users. Working with USFS Biologist, rows of conifers were untreated as physical and visual barriers to help deter illegal entry into the meadows by vehicular traffic. Currently, these small trees provide a barrier to entry.

Pre-treatment (left) and post-treatment (right) conifer removal at Upper Onion Valley.
Photo by Gwen Starrett

Other restoration activities include stabilization of channel banks. In late 2018, volunteers planted willows along 490 feet of channel in Upper Onion Valley Meadow.
Photo by Chris Fuller

Institute for Bird Populations

During 2019 the Institute for Bird Populations (IBP) completed the fifth year of data collection and data entry for bumble bee survey plots in the Power Fire area, including plots within herbicide, mastication and prescribed fire units treated in spring and summer of 2018, 2019 or both. Analysis of these data will examine how bumble bees respond to and utilize treated units. Survey plots within planned meadow restoration areas at Foster Meadow and Onion Valley were also surveyed to establish baseline bumble bee data prior to restoration. IBP captured and identified 741 bumble bees of 11 species during 715 surveys on 387 plots during 2019. A limited pilot study to determine feasibility of measuring bumble bee home ranges using radio telemetry was initiated. In addition, IBP provided data and input to the USFWS's Western Bumble Bee working group and took part in a multi-partner workshop focused on developing survey protocols for pollinators in managed forests.

Yellow-faced bumblebee (*Bombus vosnesenskii)*: female on California poppy (left), queen on non-native vetch (middle), and male on Bigelow's sneezeweed (right).
Photos by Helen Loffland and Alma Schrage

Bat Monitoring in the Power Fire

Zack Steel, now a postdoctoral associate at UC Berkeley, surveyed for bats at 8 locations in the Power Fire during summer 2019 using automated recording units, each constituting two weeks of nightly surveys, totaling to over 1000 hours of data. A manuscript summarizing the effects of wildfire severity and pyrodiversity on bat occupancy and diversity was also recently accepted for publication, with results from the Power Fire. Zack has led this effort along with Point Blue and USFS Region 5 Ecology Program.

Point Blue field crew deploying a bat automated recording unit and microphones in the Power Fire survey area.
Photo by Zack Steel

Point Blue Conservation Science

In 2017, Point Blue entered into Phase 2 of the Monitoring of birds in the Power Fire area. The first field season of monitoring birds in the Power Fire was in 2019 following reforestation treatments that took place primarily in 2018. Point Blue has also participated in the ACCG Monitoring Work Group meetings, field trips and relevant workshops.

Green-tailed Towhee (left) and Lazuli Bunting (right) in the Power Fire survey area. *Photo by Gary Woods*

Project goals included monitoring the effects of reforestation treatments, primarily herbicide spraying and mastication, as well as recent prescribed burns in the low to moderate severity areas. Bird and vegetation data was collected at 130 survey locations totaling 2,380 unique bird observations of 71 bird species in the post-reforestation treatment areas. Point Blue's Avian Bioregional Monitoring Program completed 20 conifer forest and 8 meadow avian surveys on the Calaveras Ranger District within the Cornerstone boundaries and 40 conifer forest and 8 meadow avian survey locations on the Amador Ranger District.

Post Herbicide treatments in the Power Fire survey area.
Photo by Alissa Fogg

Forest Treatment Effectiveness for Reducing Tree Mortality

In 2019, this USFS monitoring effort which covered both the Amador and Calaveras Ranger Districts produced results that detailed the resistance and resilience of our forest treatments to the 2012 – 2016 California drought. Outreach for this project has been extensive and has reached a broad audience.

- Restaino, C., Young, D., Estes, B., Gross, S., Wuenschel, A., Meyer, M., and Safford, H.. 2019. Forest structure and climate mediate drought-induced tree mortality in forests of the Sierra Nevada, USA. Ecological Applications 29(4): https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/eap.1902

- Young, D., Meyer, M., Estes, B., Gross, S., Wuenschel, Restaino, C., and Safford, H.. 2019. Forest recovery following extreme drought in California, USA: natural patterns and effects of pre-drought management. Ecological Applications 00(00): https://doi.org/10.1002/eap.2002.

- Two management briefs covering both the topic of resistance and resilience.
- California Fire Science Briefs (CFSC) covering both papers.
- Presentations at number collaboratives, scientific meetings, and interested parties.

Field crew measuring the diameter of trees in an untreated stand after the 2012-2016 drought.
Photo by Amarina Wuenschel

What are the current weaknesses or shortcomings of the monitoring process? How might the CFLRP monitoring process be improved?

The CFLRP monitoring process could be improved through increased coordination between monitoring groups. While the indicator reports provide some information, often the individual monitoring projects or studies provide additional information that cannot be summarized in the Indicator Reports. The ACCG in collaboration with SCALE and other California collaboratives has developed a place where ecological results from monitoring can be accessed based on management action and ecosystem. While the concept of this site is good for increasing adaptive management, the capacity to work with different collaboratives and keep this up to date has been slow. This might benefit by being expanded to a larger scale with commitment from the WO to manage these results. This could then be a clearinghouse for all collaborative where results can be posted as interim or final reports.
https://scale.sierrainstitute.us/ecological-monitoring/

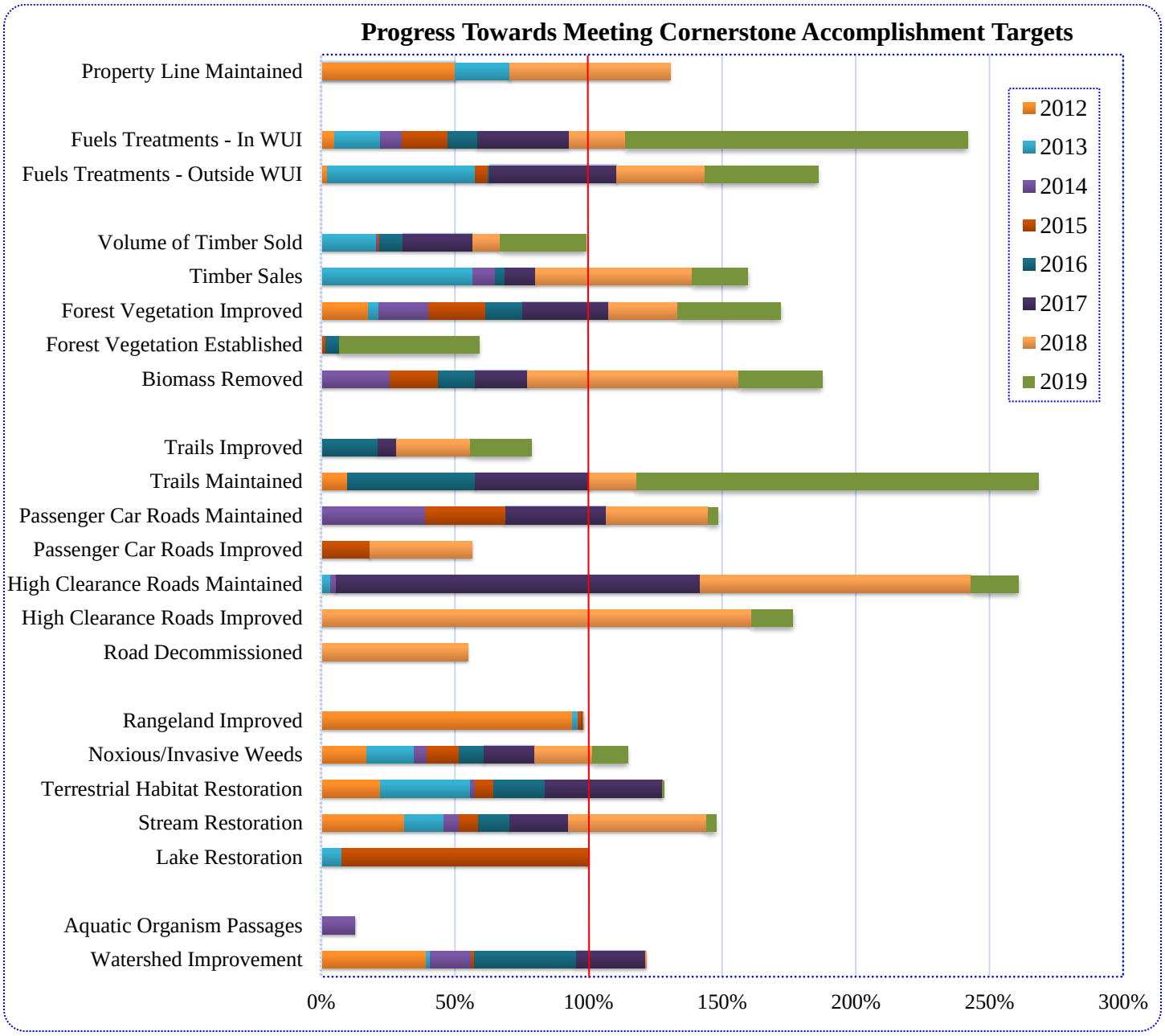
6. FY 2019 Agency performance measure accomplishments:

Performance Measure Code	Project Names	Unit of Measure	Total Units Accomplished	Total Treatment Cost ($) (Contract Costs)	Type of Funds
Watershed Improvement					
Acres of water or soil resources protected, maintained or improved to achieve desired watershed conditions (S&W-RSRC-IMP)		Acre	0	0	
Habitat Improvement					
Miles of stream habitat restored or enhanced (HBT-ENH-STRM)	• OHV Trail Improvements	Miles	.5	0	CFLN CMXN NFWF
Acres of terrestrial habitat restored or enhanced (HBT-ENH-TERR)	• Conifer and Willow planting at 3 Meadow Project	Acre	18.57	0	CFLN PTNR
Manage noxious weeds and invasive plants (INVPLT-NXWD-FED-AC)	• Bear River • Ellis Plantation • Omo Ranch • Salt Springs Road • Hathaway Pines Work Center	Acre	128.7	0	CFLN
Road Improvements					
Miles of National Forest System Road decommissioned (RD-DECOM-SYS)		Miles	0	0	
Miles of high clearance system roads improved (RD-HC-IMP-MI)	• Scottiago Timber Sale Roads	Miles	7.0	$78,000	CFLN
High clearance roads receiving maintenance (RD-HC-MAINT-MI)	• Scottiago Timber Sale Roads	Miles	11.9	$46,470	CFLN
Miles of passenger car system roads improve (RD-PC-IMP-MI)		Miles	0	0	
Miles of existing passenger car system roads reconstructed (RD-PC-RCNSTR)		Miles	0	0	
High clearance road reconstruction (RD-HC-RCNSTR)	• Five Corners • Armstrong Five • Louis Jordan Mine	Miles	7.0	25,000	CFLN
Passenger car roads receiving maintenance (RD-PC-MAINT-MI)	• Gold Note	Miles	7.7	0	CFLN
Road Storage		Miles	0	0	
Trail Improvements					
Miles of system trail maintained to standard (TL-MAINT-STD)	• Thunder Mountain • Tanglefoot • Winnemucca • Camp Irene • Tamarack OHV • Dorrington OHV • Calaveras Dome OHV	Miles	114.28	0	CMXN CWFS
Miles of system trail improved to standard (TL-IMP-STD)	• Allen Camp • Horse Canyon • Munson Meadow • Lake Margaret • Tamarack OHV • Calaveras Dome OHV	Miles	9.2	0	CMXN

Performance Measure Code	Project Names	Unit of Measure	Total Units Accomplished	Total Treatment Cost ($) (Contract Costs)	Type of Funds
Forest Improvements					
Acres of forest vegetation improved (FOR-VEG-IMP)	• Bear River • Camp Creek • Cole Creek • Panther • Lumberly • Scottiago	Acres	2,948	348,000	CFLN RIRI SSCC
Acres of forest vegetation established (FOR-VEG-EST)	• Bear River • Camp Creek • Cole Creek • East Panther • Penmoke • Rocky Knob	Acres	843	334,700	RIRI
Acres of forestlands treated using timber sales (TMBR-SALES-TRT-AC)	• Callecat • Copycat • Foster Firs	Acres	673	0	NONE
Volume of timber sold (TMBR-VOL-SLD)	• Panther Stewardship Project • Scottiago Stewardship Project • Callecat Stewardship Project • Dam Salvage Deck Sale • Pumpkin Hollow Stewardship	CCF	37,065	7,440	CFLN NFTM SSSS
Green tons from small diameter and low value trees made available for bio-energy production (BIO-NRG)	• Issued Permits • View 88 Biomass Piles	Green tons	2,839.2	0	NONE
Acres of rangeland vegetation improved (RG-VEG-IMP)		Acres	0	0	
Acres covered by stewardship contracts/agreements (STWD-CNTRCT-AGR-AC)	• Pumpkin Hollow Stewardship • Panther Stewardship Project • Scottiago Stewardship Project	Acres	2,423	0	NONE
Fuel Treatments					
Acres of hazardous fuels treated outside the wildland/urban interface (WUI) to reduce the risk of catastrophic wildland fire (FP-FUELS-NON-WUI)	• Bear River • Lumberly • Callecat • Black Springs • Pumpkin Hollow • Winton Fuelbreak	Acre	2,092	237,300	CFLN NFHF SSCC WFPR
Acres of WUI high priority hazardous fuels treated to reduce the risk of catastrophic wildland fire (FP-FUELS-WUI)	• Bear River • Scottiago • Camp Creek • Arnold Avery • Cole Creek • Black Springs • East Panther • Lakemont • Mokey Bear	Acres	14,574	0	CFLN NFHF SSCC WFPR RIRI NONE
Prescribed fire accomplished	• Moore-Bellflour • Callecat • View 88 • Power Fire	Acres	1,011	0	
Inventory and Monitoring					
Miles of property line maintained to standard (LND-BL-MAINT-STD)		Miles	0	0	

Cornerstone Project Implementation

The Cornerstone CFLR just completed its 8th year of project implementation. Work in the initial years focused on watershed restoration; aquatic, terrestrial wildlife, and rangeland restoration; and fuels reduction in the Wildland Urban Intermix (WUI). Many of the Cornerstone restoration projects that have actions to decommission, maintain, or improve roads have now been implemented. Over the next year, more projects are expected to have actions related to improving forested and meadow environments, reforestation, timber sale stewardships, fuelbreak maintenance, and treating fuels outside of WUIs to meet our management objectives.



7. **FY 2019 accomplishment narrative**.

The ACCG continually strives to meet its all-lands approach, leveraging the Cornerstone Project to reach its triple-bottom-line goals. Consistent with ACCG's focus, the goals of the Cornerstone Project are to:

- Restore and maintain high-value watersheds in a proper functioning condition.
- Reduce threats to lives and properties in the wildland-urban intermix and reduce wildfire protection costs.
- Restore and maintain forest structure, function and ecological processes to promote aquatic and terrestrial health, biological diversity, and habitat for a variety of native species, especially species at risk.
- Create more resilient vegetation conditions to meet ecological and social goals.
- Restore and protect prehistoric, historic, and active cultural sites in a sensitive manner.
- Create sustainable, local, restoration stewardship economic activity, jobs, and markets based on restoration treatment work, development of diverse woody biomass, and small-diameter tree by-products.
- Collaboratively involve the diverse ACCG interests in project planning, implementation, monitoring, and adaptive management.
- Contribute to greater community stability through ongoing, sustainable restoration activities on public and private lands.
- Integrate ecological restoration with social goals, such as local employment and community social infrastructure development.

The ACCG has spent substantial time ensuring its core values are considered at all phases of project planning and implementation. This has not always been easy and takes constant effort and self-policing. Towards this goal, the ACCG has had the following successes with partners in Fiscal Year 2019:

Mule Deer Foundation Agreement

In FY19, the Calaveras Ranger District applied funds to an existing SPA with Mule Deer Foundation to construct the new Black Springs Campground. Construction began in late 2019 to start site grading, excavation, and construction of campsites, parking, trails as well as a road plan and package, placement of improved surfaces and large structures including cattleguards, gates, toilets, and other campground features. This is an exciting project, a first for our partner Mule Deer Foundation, and will provide for much needed recreation infrastructure in an important and popular area for the summer campers and fall hunters. The Black Springs Campground construction is expected to be completed in 2020. In addition, the CFLN funds added to the agreement will be used for both the campground as well as road work, mastication and fuels work within the district to work toward Cornerstone Project goals.

Black Springs Campground: Construction began in 2019 to fix areas such as user created routes that can alter natural water flow. *Photo by USFS*

National Wild Turkey Federation Agreement

Working through a Stewardship Agreement with the National Wild Turkey Federation (NWTF) the Amador Ranger District was able to complete biomass removal of slash piles left from the View 88 Fuels Reduction and Forest Health project. Logging activities on the project were completed in fall of 2018 but the large piles of limbs, tops and small trees remained, many in plain sight of the scenic byway of California State Route 88. Normally these large piles would be burned by Forest Service personnel when weather conditions allow. However, in this case, the material was able to be chipped with large grinders on site and then loaded into trailers and hauled off site. The material will ultimately be used to generate electricity at a biomass burning power plant. Although the Forest Service provided most of the funding to get the work accomplished, NWTF was able to award the contract to a contractor based out of Escalon California and handle the administrative actions related to contract implementation.

Great Basin Institute

By working through a Master Participating Agreement with the US Forest Service Pacific Southwest Region, Great Basin Institute (GBI), was able to provide a seasonal workforce to the Amador Ranger District that filled multiple needs. GBI is an interdisciplinary field studies organization that promotes environmental research, education, and service throughout the West. The Institute's mission is to advance applied science and ecological literacy through community engagement and agency partnerships, supporting national parks, forest, open spaces and public lands. GBI provides a wide variety of environmental services to train and develop the next generation of conservationists and resource managers.

A ten-person work crew was provided that was focused on doing timber stand improvement work in the Power Fire Reforestation Project. This crew completed tasks such as brush cutting and herbicide application in conifer plantations. Another crew of 5 was assigned primarily as contract inspectors overseeing tree planting and herbicide work in the Power Fire area. A third crew was employed to conduct timber marking on the Scottiago Forest Health Project. All of this work was critical in meeting the accomplishments for the Amador Ranger District in FY 19. Due to difficulties in getting employees through the Forest Service seasonal hiring process, GBI has become a highly valued partner and essentially provided all but one of the employees used in timber and reforestation work for the 2019 field season.

Contractors processing View 88 Biomass piles. *Photo by USFS*

National Fish and Wildlife Foundation Partnership and 2019 Grants Awarded

In 2016, National Fish and Wildlife Foundation (NFWF) and the ENF entered into a Supplemental Project Agreement (SPA). The purpose of the SPA was to restore ecological integrity and healthy functioning of watersheds and ecosystems affected by the Power Fire. By 2017, NFWF and ENF established a Restoration Strategy (http://www.nfwf.org/norcal/Documents/NorCal_RestorationStrategy.pdf) to identify the areas and projects in which would provide the highest return on our conservation investments. In addition, this Restoration Strategy served as a tool to craft Request for Proposals (RFP) for partners, and to evaluate proposals which were submitted by partners.

In FY19, NFWF awarded over 2.5 million dollars to eight projects that will contribute over $690,000 in non-federal match for a total conservation investment of over 3.2 million dollars over the next two years.

NFWF awarded funding to the below projects in the Eldorado National Forest with implementation expected in FY20:

- Restoring Meadows in the Bear River and Cole Creek Watersheds
- Restoring Watersheds Impacted by Illegal Marijuana
- Improving Drainage by Upgrading Culverts
- Improving Fuels Management to benefit California Spotted Owl
- Surveying Aquatic Species of Concern and Invasive Species
- Improving Fen and Endangered Sierra Nevada Yellow Legged Frog Habitat
- Strategic Analysis of Fuels Management in the Power Fire Scar
- Improving Management of Native American Plants

FY19 NFWF awarded projects are projected to:

- Improve 60.83 miles of roads
- Restore 1.25 miles of riparian habitat
- Conduct planning, design, and permitting activities for 116 acres of meadows
- Restore 13.5 acres of wetlands
- Restore hydrology across 24 acres
- Improve management practices on 21.3 acres
- Provide fuels management treatments benefit the California spotted owl
- Rectify 40 fish passage barriers
- Complete 5 studies whose findings will be used to adapt management and inform management decisions
- Engage 37 volunteers to participate in project activities

Species Management: California spotted owl (right) and Sierra Nevada yellow legged frog (left).
Photo by USFS

FY 2019 Upper Mokelumne River Watershed Authority Accomplishments

Pumpkin Hollow Restoration Project (Calaveras Ranger District)
In 2019, Upper Mokelumne River Watershed Authority (UMRWA) prepared for the third and final field season to complete all tasks associated with the SNC funded Pumpkin Hollow Restoration Project. UMRWA worked closely with the Stanislaus National Forest (STF) staff to complete a revised SPA for RFP which received no bids after two bidding processes in 2018. In 2019, UMRWA managed four contractors to complete 515.3 acres of treatments (plantation thinning, mastication, roadside clearing, fuelbreak, and meadow/aspen restoration).

After Photo above depicts fuels reduction implemented inside the Pumpkin Hollow Project Area. Restoration actions in Pumpkin Hollow include removal of surface and ladder fuels, thinning of overstocked forested stands, and thinning plantations. The photo above was taken inside the treatment area after treatments occurred. *Photo by Pat Ferrell*

Cabbage Patch Restoration Project (Calaveras Ranger District)
In 2019, UMRWA completed all 314 acres of treatment (hand thinning, mastication, and fuels) under the original SNC grant agreement. UMRWA also identified additional budget remaining for implementation based on operator costs in executed contracts under the existing grant agreement. UMRWA staff worked closely with the STF to identify additional acres in the Hemlock Project Area in need of treatment. UMRWA submitted a request to SNC for approval to treat additional acres in the Fore Treatment Area of the Hemlock EA. UMRWA is now under contract to masticate 131.4 acres in 2020.

An example of fir plantation requiring thinning and fuel treatment (left) and dense forest stand requiring treatment of ladder fuels and brush (right). *Photo by Landmark Environmental*

Black Springs Restoration Project (Calaveras Ranger District)

On October 1, 2018 UMRWA submitted a third Proposition 1 grant application to the Sierra Nevada Conservancy (SNC) for the Black Springs Restoration Project for $1,000,000. The purpose of this project is to reduce forest fuels, improve ecological resilience, protect tributaries to Mokelumne water storage facilities, support the regional economy and build contractor capacity. This project falls under the Master Stewardship Agreement between the USFS and UMRWA that was signed in 2016. The total estimated cost is $1,400,000, including the USFS share of costs. In 2019, UMRWA managed two contractors to complete 161 acres of hand and mechanical thinning treatments.

In 2016, Regional Forester Randy Moore signs the UMRWA Master Stewardship Agreement with ACCG members Steve Wilensky and Alpine County Supervisor Terry Woodrow. *Photo by USFS*

National Fish and Wildlife Foundation Grant (Amador Ranger District)

In February 2019, UMRWA submitted a grant application to the National Fish and Wildlife Foundation for the project entitled "Power Fire Culvert Improvement and Erosion Control Project" for $1,286,611. The project is designed to replace or reconstruct culverts and water control structures (e.g., water bars, graded dips, berms) on nearly 60 miles of roads in the Panther Creek and Bear River sub-watersheds in the Power Fire scar in Eldorado National Forest. Project will identify and reconstruct or replace a minimum of 40 culverts and up to 200 water control structures that will improve aquatic organism passage, instream flow and watershed health. The grant was awarded in August 2019 (refer to Page 23 of this report) and UMRWA has completed the initial field work to prepare for procurement. Project implementation is planned for summer 2020.

An example of culvert work needed in the Power Fire area: Channel created along the road due to plugged culvert (left) and culvert downstream (right). *Photo by Joe Chow*

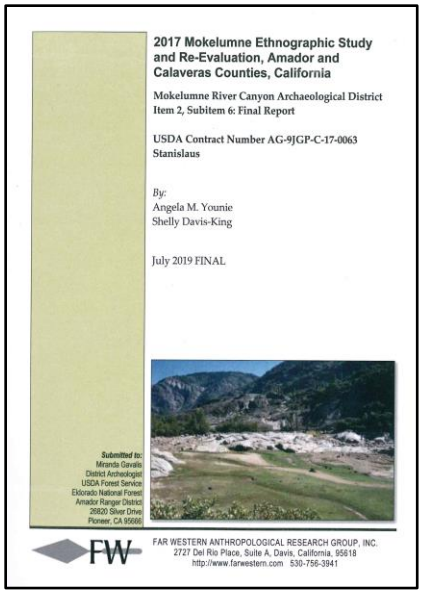
Calaveras Healthy Impact Product Solutions (CHIPS)

The CHIPS program provided much needed fuels reduction work in the forest (refer to Page 9 of this report) on several Cornerstone fuels projects. The work included thinning, hand piling, and fuelbreak maintenance. The CHIPS 9-person crew spent 94 days on the Amador Ranger District at a cost of $183,945. The CHIPS 6-person crew spent 52 days on the Calaveras Ranger District at a cost of $53,365.

CHIPS crew work on roadside fuelbreaks by clearing brush about 25 feet from the edge along 21 miles of Highway 88. Before treatment (left) and after treatment (right). *Photo by Katherine Glick*

Heritage Resources

During FY 19, the Mokelumne River Canyon Archaeological District (MRCAD) Ethnographic Study and Reevaluation contract was completed. The project contributes information to better understand the use and significance of the MRCAD. Eighteen tribal members were interviewed and discussed their recollections on how the Mokelumne River Canyon was used by the tribes and shared stories of their lifeways. The final Reevaluation of the Mokelumne River Canyon Archaeological District was completed and found that the MRCAD is eligible for the National Register of Historic Places (NRHP).



The Amador hosted the Oregon-California Trails Association (OCTA), a local volunteer group. The OCTA volunteers came for several days to relocated portions of the Mormon-Emigrant Trail and provide site monitoring. The group used metal detectors to find buried artifacts associated with the wagon trains of the 1840s-50s. The volunteer's hours totaled over 406 hours.

CHIPS Fuel Reduction in Heritage Sites

In October 2018, eight heritage sites were treated by the CHIPS crew. The crew worked to reduce fuels around sensitive features and off areas with artifacts. Many of these sites had become overgrown. The project called for the reduction or rearrangement of fuel concentrations using hand cutting, chipping or other mechanical treatment. Given the density of fuels within the sites, should a fire burn through the area there would be an increased chance of damaging artifacts and features.

CHIPS crew work to reduce fuel load off the remains of a collapsed cabin.
Before treatment (left) and after treatment (right). *Photo by US Forest Service*

Recreational Trails

In FY19, there was over 112 miles of non-motorized and motorized trails improvements completed by Forest Service Staff, Interns and Volunteers.

Non-motorized trails

- American Conservation Experience (16 people, 800 hours) brushing and log removal was performed on the Summit City and Evergreen trails. The brush on the Summit City trail had not been pruned back for four years It took the crew three 10-hour days to cut the brush back and another day to clear eight logs both trails. The ACE crew also mitigated some of the numerous "social" trails created in the heavily used Winnemucca Lake area of the Mokelumne Wilderness.

- Youth Conservation Corps "Generation Green" (15 people, 900 hours over 3 weeks) improving accessibility on the trails in the district. Pruning brush and cutting trees off the trails was the primary focus to open several popular trails such as Devils Lake, Granite Lake, Margaret Lake; and long sections of the Emigrant Lake trail, the Mormon Emigrant Historic trail, and the Allen Camp trail.

- Alpine Trails Association (6 people, 240 hours) opening trails which had not been clear of logs and brush and not been accessible to the public for many years. The Amador Ranger District recreation staff helped by cutting away the larger trees across the trail, providing trail head kiosks, and using Forest social media to alert the public of the trail's status.

- Arnold Rim Trail Association (1076 hours) duties consisted of removing down logs across hiking trails, repair signs and posts, brush hiking trails, block illegal routes with brush and limbs. The volunteers also worked toward improving water drainage features on various trails.

In the Mokelumne Wilderness areas of the Cornerstone, only the use of traditional tools, not the use of motorized/mechanical tools, is allowed. The time and the amount of personnel to complete trail work is greatly increased. Additional time is needed just to access the areas that need work because of foot travel only.

Drawing upon the twenty-five member Mokelumne Wilderness Volunteers (MWV) to help with the reconnaissance and the clearing of the trails was imperative. The MWVs contributed over 300 hours of work in this capacity and the Amador Ranger District spent 60 hours training the volunteers and coordinating their activities. The first three Saturdays of June were group volunteer workdays where the Tanglefoot, Minkalo, and Hidden Lake trails were cleared.

American Conservation Experience crew repaired water bars on the well-used trail to Winnemucca Lake. *Photo by Chip Morrill*

Alpine Trails Association donated their time and labor to making Cornerstone trails accessible. This is one of the many logs that were cut off the Wilderness trail by using a five-foot crosscut saw. *Photo by Chip Morrill*

Arnold Rim Trail Association volunteers monitoring trail conditions on horseback. *Photo by US Forest Service*

Motorized Trails

- Polka Dot Motorcycle Club (2 people, 80 hours) cleared OHV trails in the Gold Note OHV area in preparation of their annual motorcycle timed special event.

- American Conservation Experience (7 people, 550 hours) made 36 miles of OHV trails and roads accessible by clearing over seventy-five fallen trees in the Gold Note OHV.

- Eastern Sierra Conservation Corps (10 people, 650 hours) worked with Forest Service staff to address erosion mitigation measures on the Horse Canyon motorcycle trail. All the work was performed by hand with over fifty water bars constructed of rocks/boulders, logs, and native soil installed in the course of the project.

The Calaveras Ranger District has a strong history with OHV Volunteer involvement. Each year OHV clubs, jeep groups, and equestrian associations take on annual trail work that consists of removing down logs across trails, installation and repair of OHV signage, and acting to block illegal routes that have the potential to cause resource damage.

- Vallecito Conservation Camp – 960 volunteer hours
- Joaquin Jeepers – 204 volunteer hours
- Espirit de Four – 102 volunteer hours
- Railtown Off-Road Club – 96 volunteer hours
- Calaveras Ranger District OHV Volunteers – 406 volunteer hours

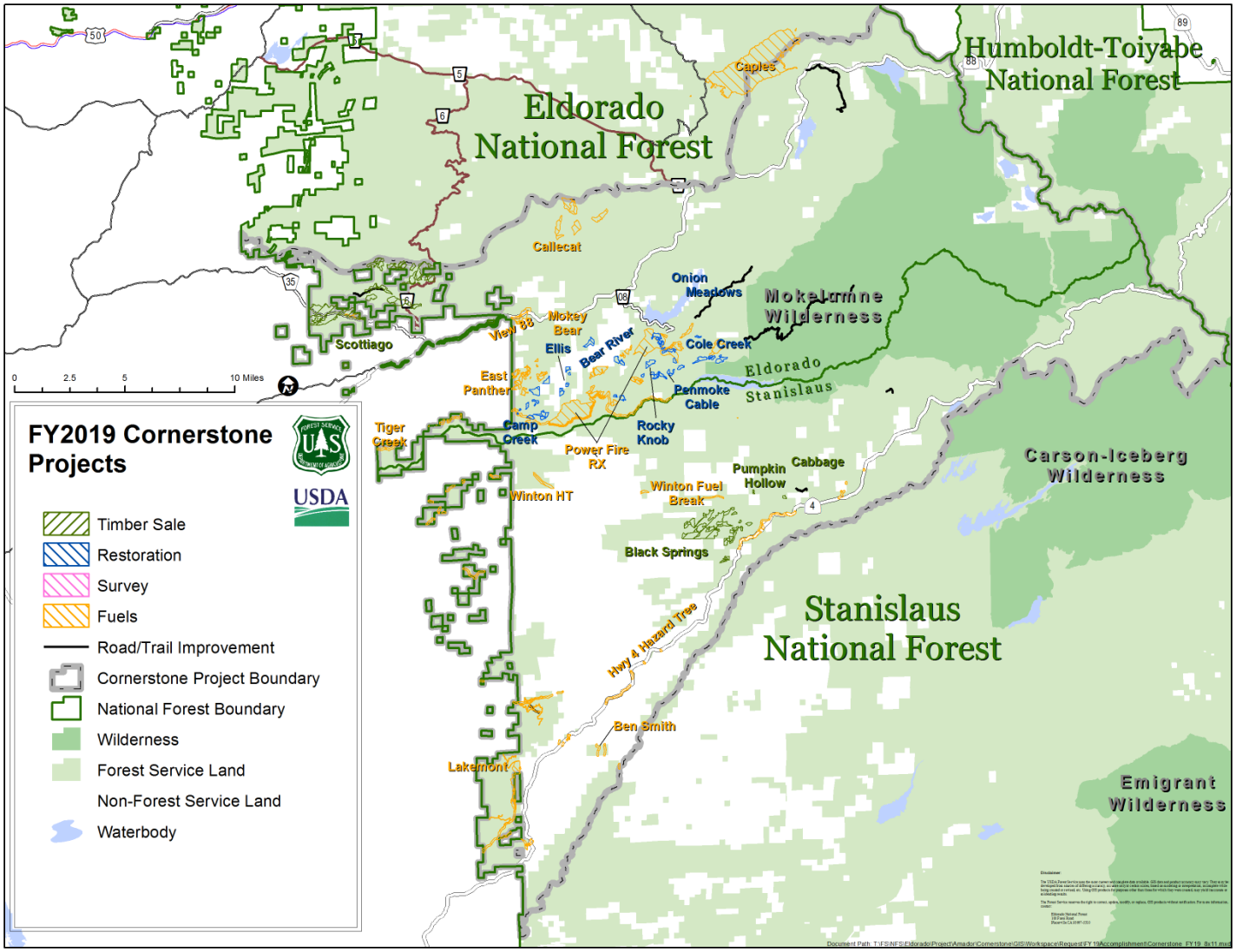
American Conservation Experience crew cleared numerous trees to help make the Gold Note OHV trail system accessible to the public. *Photo by Chip Morrill*

Esprit de Four four-wheeling club volunteers clear late spring snow from OHV trail. *Photo by US Forest Service*

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

Fiscal Year	Footprint of Acres Treated (without counting an acre of treatment on the land in more than one treatment category)
FY 2019	9,417
Estimated Cumulative Footprint of Acres (2012 through 2019)	32,135

Footprint acres were calculated by first summing treatment acres for projects listed in the FY 2019 accomplishments identified in Question 6, then removing overlapping treatment areas. Footprint acres calculated in ArcGIS represent acres treated per fiscal year. Spatially overlapping treatments are only summarized once.



9. **Describe any reasons that the FY 2019 annual report does not reflect your project proposal, previously reported planned accomplishments, or work plan.**

Performance Measure Code	Planned Accomplishment	FY 2019 Accomplished (See Question 6)
Watershed Improvement		
Acres of water or soil resources protected, maintained or improved to achieve desired watershed conditions (S&W-RSRC-IMP)	0	0
Number of stream crossings constructed or reconstructed to provide for aquatic organism passage (STRM-CROS-MITG-STD)	0	0
Habitat Improvement		
Miles of stream habitat restored or enhanced (HBT-ENH-STRM)	2	.5
Acres of terrestrial habitat restored or enhanced (HBT-ENH-TERR)	27	18.57
Manage noxious weeds and invasive plants (INVPLT-NXWD-FED-AC)	100	128.7
Road/Trail Improvements		
Miles of system trail maintained to standard (TL-MAINT-STD)	0	114.28
Miles of system trails improved (TL-IMP-STD)	0	9.2
Miles of high clearance system roads improved (RD-HC-IMP-MI)	10	7
High clearance roads receiving maintenance (RD-HC-MAINT-MI)	0	11.9
Miles of passenger car system roads improved (RD-PC-IMP)	46	0
Miles of road decommissioned (RD-DECOM)	.5	0
High clearance roads reconstruction (RD-HC-RCNSTR)	0	7
Passenger car roads receiving maintenance (RD-PC-MAINT-MI)	0	7.7
Forest Improvements		
Acres of forest vegetation established (FOR-VEG-EST)	700	843
Acres of forest vegetation improved (FOR-VEG-IMP)	0	2,948
Acres of forestlands treated using timber sales (TMBR-SALES-TRT-AC)	0	673
Volume of timber sold (TMBR-VOL-SLD)	38,000	37,065
Green tons from small diameter and low value trees (BIO-NRG).	1,000	2,839.20
Acres of rangeland vegetation improved (RG-VEG-IMP)	0	0
Acres covered by stewardship contracts/agreements (STWD-CNTRCT-AGR-AC)	0	2,423
Fuel Treatments		
Acres of hazardous fuels treated outside the WUI (FP-FUELS-NON-WUI)	1,000	2,092
Acres of hazardous fuels treated inside the WUI (FP-FUELS-WUI)	2,000	14,574
Inventory and Monitoring		
Miles of property line maintained to standard (LND-BL-MAINT-STD)	0	0

The ACCG Collaborative is very active in the Cornerstone project. They have assisted with all aspects of project planning, implementation, and monitoring. However, certain factors and unexpected challenges have an impact the success of the Cornerstone project from year to year that include:

Forest Vegetation Established Targets

- Due to the lack of accomplishments in site preparation and herbicide release in FY 2018, only 843 acres planted in FY 2019. The additional acres are planned to be accomplished in FY 2020.
- Complications that led to this delay include, high bid prices for contract work as well as inability to hire the needed number of seasonal employees.

FY18 Fire Borrow Transfer

- Power Fire funds held by fire transfer and not available for FY19 work.
- CFLN funds used for reforestation in place of Fire Settlement funds.

Government shutdown

- Contracting delays, federal employees missed the January 2019 ACCG meeting due to the furlough.

Trail Work Exceeded Planned

- Trail work accomplishments exceeded target; seasonal trails work through agreements with American Conservation Experience, Youth Conservation Corps "Generation Green", and Eastern Sierra Conservation Corps.

Aquatic Organism Passages

- Aquatic Organism Passage targets expected with Hemlock Project implementation.
- Additional Watershed Accomplishments expected with NFWF culvert work planned for FY20-FY21.

Hazardous Fuels Treated Exceeded Planned

- Burn window and work timing favorable in the last two years.
- Community and ACCG support for fuels reduction work.
- Staff and funding dependent to reach Fire and Fuels targets.

Water or Soil Resources Protected

- Cornerstone Watershed Improvement targets met by 122%.
- No S&W-RSRC-IMP accomplishments in FY19.
- Culvert accomplishments S&W-RSRC-IMP in FY20; expected with NFWF culvert work.

Volume of Timber Sold

- Timber Stewardship is forest priority.
- Projected accomplishment to exceed project goals in FY20 with sale of Black Springs and Cabbage Timber Sale.

Public Safety Power Shutoff

- There were several power outages in the fall of 2019 due to the local utility attempts to avoid a wildfire start.
- The ACCG missed one Planning workgroup meeting and associated field trip due to one of the power outages.

10. **Planned FY 2020 Accomplishments**

Performance Measure Code	Unit of measure	Planned Accomplishment for 2020 (National Forest System)	Project Name	Planned Accomplishment on non-NFS lands within the CFLRP landscape
S&W-RSRC-IMP	Acres	40	• Power Fire Culverts	unknown
STRM-CROS-MITG-STD	Number	7	• Hemlock Project AOP	unknown
HBT-ENH-STRM	Miles	8	• Power Fire Culverts • Foster Meadow	unknown
HBT-ENH-TERR	Acres	35	• Onion Meadows • Foster Meadow	unknown
INVPLT-NXWD-FED-AC	Acre	100	• District Treatments • Hathaway Pines Work Center	unknown
TL-MAINT-STD	Miles	65	• Horse Canyon • Emigrant Lake	unknown
TL-IMP-STD	Miles	18	• Grouse Lake • Camp Irene • Summit City	unknown
RD-HC-IMP	Miles	42	• Culvert Replacements • Cabbage & Black Springs Stewardship Timber Sales Road	unknown
RD-HC-MAINT-MI	Miles	5	• Power Fire Roads • Calaveras District Roads	unknown
RD-HC-RCNSTR	Miles	22	• Cabbage & Black Springs Stewardship Timber Sales Road	unknown
RD-PC-IMP	Miles	0		unknown
RD-PC-MAINT-MI	Miles	11	• North South Road • Mormon Emigrant Trail • Merhten Springs Road	unknown
RD-DECOM	Miles	3.7	• Cabbage & Black Springs Stewardship Timber Sales Road	unknown
RD-PC-RCNSTR	Miles	0		unknown
FOR-VEG-EST	Acres	600	• Power Fire Reforestation	unknown
FOR-VEG-IMP	Acres	1,700	• Power Fire Herbicide Release • Power Fire PCT	unknown
RG-VEG-IMP	Acres	.5	• Dufrene Pond	unknown
TMBR-SALES-TRT-AC	Acres	1,920	• Cabbage & Black Springs	unknown
TMBR-VOL-SLD	CCF	37,900	• Cabbage & Black Springs	unknown
BIO-NRG	Green tons	1,000	• Tree Mortality areas • Fire Wood Permits	unknown
STWD-CNTRCT-AGR-AC	Acre	1,920	• Cabbage & Black Springs	unknown
FP-FUELS-NON-WUI	Acre	1,000	• District Pile Burn • Foster Firs	unknown
FP-FUELS-WUI	Acres	3,500	• Encore and Sourgrass • View88 and Tiger Creek	unknown

11. Planned accomplishment narrative and justification if planned FY 2020 accomplishments and/or funding differs from CFLRP project work plan:

In 2016, NFWF and the ENF entered into a Supplemental Project Agreement (SPA). The purpose of the SPA was to restore ecological integrity and healthy functioning of watersheds and ecosystems affected by the Power Fire. The partnership established a financial plan in which NFWF would manage funds directly associated with planning and restoration within the fire perimeters, except for funds directly associated with planning and restoration for the broader watersheds. The accomplishment reporting for the FY2018 awarded projects (refer to FY18 Cornerstone Annual Report), and the newly awarded FY2019 projects (refer to Page 23 of this report) was not factored into the original Cornerstone Proposal. Once these projects are fully implemented in FY20-FY21 we will updated accomplish totals and projections.

We continue to move forward completing work on the ground within the Cornerstone Project to fulfill the proposal objectives and purposes of the Omnibus Act of 2009. In FY 2020, the Cornerstone Project will continue implementation of several large projects that will improve our performance towards meeting the reforestation and timber sold goals, to include the Scottiago Forest Health Project, Panther Fuels Reduction and Forest Health Project, Power Fire Reforestation, Cabbage and Black Springs Stewardship.

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

ACCG Membership is open to all stakeholders, individuals, or organizations. Membership requires signing a copy of the ACCG Memorandum of Agreement (MOA) and acceptance as a member by the group at a regularly scheduled meeting. There are currently over 40 ACCG MOA signatories. However, the signature of the MOA is not a requirement for participation in ACCG. All ACCG meeting and events are open to the public. Meeting and event announcements, agenda, notes, and current ACCG membership is posted on the group's website (http://www.acconsensus.org).

General Meeting Trends FY 2017 to FY 2019
Participation in ACCG General Meetings has varied since its inception in 2008. Participation from FY 2018 to FY 2019 ranged from 68 individuals in FY 2018 to 92 individuals in FY 2019. This reflects an increase of 35% in overall individual participation from FY 2018 to FY 2019.

Affiliation of ACCG members has also varied across time. ACCG observed an increase in non-government participation from FY 2018 to FY 2019, from 33 to 47 individuals. Respectively, we also observed an increase in government (Federal, State, and County) participation from 2018 to 2019, from 35 to 45 individuals.

ACCG observed an increase in non-government hours reported from FY 2018 to FY 2019, from 935 to 1,238 hours. Respectively, a decrease in government hours reported from FY 2018 to FY 2019, from 688 to 578 hours. This reflects an increase of 32% non-government and decrease of 16% in government overall hours reported from FY 2018 to FY 2019.

General Meeting Participants								
	Number of Individuals			**Hours Reported**			**% of Total Hours**	
FY	**Total**	**non-Gov't**	**Gov't**	**Total**	**non-Gov't**	**Gov't**	**Non-Gov't**	**Gov't**
2017	104	52	52	2,736	1,513	1,223	55%	45%
2018	68	33	35	1,623	935	688	58%	42%
2019	92	47	45	1,816	1,238	578	68%	32%

FY 2019 ACCG General Meeting Speakers	
October 2018	Jill Micheau/Michael Pickard, ACCG Strategic Plan Discussion
November 2018	Jill Micheau/Michael Pickard, ACCG Strategic Plan Discussion, cont'd
January 2019	Review of 2018 Accomplishments and 2019 Projects
February 2019	Tania Carlone, Consensus Building Institute (CBI), *Findings from the ACCG Assessment Interviews*
March 2019	Shana Gross, USFS, *prioritizing meadow restoration based on climate change: study results* and *status and future of monitoring in the ACCG*
April 2019	Jason Kuiken and Rebecca Johnson, USFS, *STF Potential wildland fire Operational Delineations (PODS) delineation and prioritization process*
May 2019	Tania Carlone, CBI, *Final ACCG Engagement Strategy and Next Steps Brief*
June 2019	Tania Carlone, CBI, *Mutual Gains Negotiation Training*
July 2019	Lindsay Buchanan and Jessica Robertson, *Overview of CFLR Program*
August 2019	Brian McCrory, USFS, *Designation by Prescription*
September 2019	Hilary Sanders, Sierra Institute, *ACCG socioeconomic monitoring results* Stephanie Horrii, CBI, *Application of the mutual gains approach to negotiation and effective communication skills*

ACCG Facilitation Support

Since late 2018, the Consensus Building Institute (CBI) has been providing neutral, third-party facilitation services to the ACCG. CBI conducted interviews with 29 ACCG members to identify the key issues, challenges, and priorities of the group. CBI then worked with the ACCG to incorporate the interview results and the ACCG's 2018-2023 strategic plan into the Collaborative Engagement Strategy. The Collaborative Engagement Strategy provides a pathway for the ACCG to refine its governance structure, policies and procedures, and to acquire the tools and resources necessary to increase the group's collaborative capacity.

CBI worked with the ACCG Admin Work Group to prepare for and facilitate monthly ACCG Planning Work Group and General Meetings to advance the ACCG's efforts to realize an all-lands, landscape-scale vision and achieve the ACCG's triple bottom line mission. CBI also prepared and conducted three training modules on mutual gains negotiation, effective communication particularly as it relates to difficult conversations, and strategic collaboration. These meetings and trainings fostered ACCG understanding of the issues (e.g., through guest presentations and field trips) and collaborative consensus-seeking dialogue. CBI also connected with facilitators supporting other forest collaboratives (e.g., Yosemite Stanislaus Solutions [YSS], Dinkey, and South Fork American River [SOFAR]) to share lessons learned and discuss engagement approaches to support coordination and collaboration across the Sierra landscape.

CBI is helping the ACCG finalize procedures and tools outlined in the Collaborative Engagement Strategy, such as a project development and approval process; a project support evaluation tool; a communication, outreach, and engagement plan; and updates to the ACCG MOU.

Planning Work Group

Field meetings are routinely offered and open to all ACCG members and public to gain knowledge and ask questions about potential forest management projects. This year, much of the collaboration work took place on field trips. In FY 2019, ACCG members participated in 3 field visits to project sites ranging from the proposed Scottiago project (including guest speakers Malcolm North and John Keene), review of the Callecat Timber Sale (a GTR 220 project with skyline units), and the completed Hemlock Forest Restoration project. In FY 2020, ACCG field trips will continue as a primary means of explaining project concepts, educating partners, and sharing values and objectives within the group.

13. **Media recap**.

Since 2015, the ACCG website has been a convenient tool to inform and update the public and members of ACCG topics and activities. The website calendar is updated frequently, providing our members with information on educational opportunities, volunteer projects, webinars, funding opportunities, field trips, and, of course, all ACCG meetings (General, Planning, Monitoring, Administration Work Group meetings). We also post meeting notices for many of our member organizations.

Project focuses on forest thinning in the Mokelumne River watershed
http://www.calaverasenterprise.com/news/article_a48e2304-d88d-11e8-8bbd-83a180229bc6.html

Exploring socioeconomic effects of fire in Amador and Calaveras Counties
https://sierrainstitute.us/exploring-socioeconomic-effects-of-fire-in-amador-and-calaveras-counties/

Forest Thinning Project near Glencoe Breaks Ground
http://www.calaverasenterprise.com/news/article_9d257e94-6cf5-11e9-95d7-7f12f793cb4f.html

Barriers to mitigating tree mortality on private, BLM, Forest Service land
http://www.calaverasenterprise.com/news/article_fbc896b8-7d6f-11e9-94ea-7b4b381822a0.html

Officials thin trees along Amador County highway to prevent fires
https://www.kcra.com/article/officials-thin-trees-along-amador-county-highway-to-prevent-fires/28404255

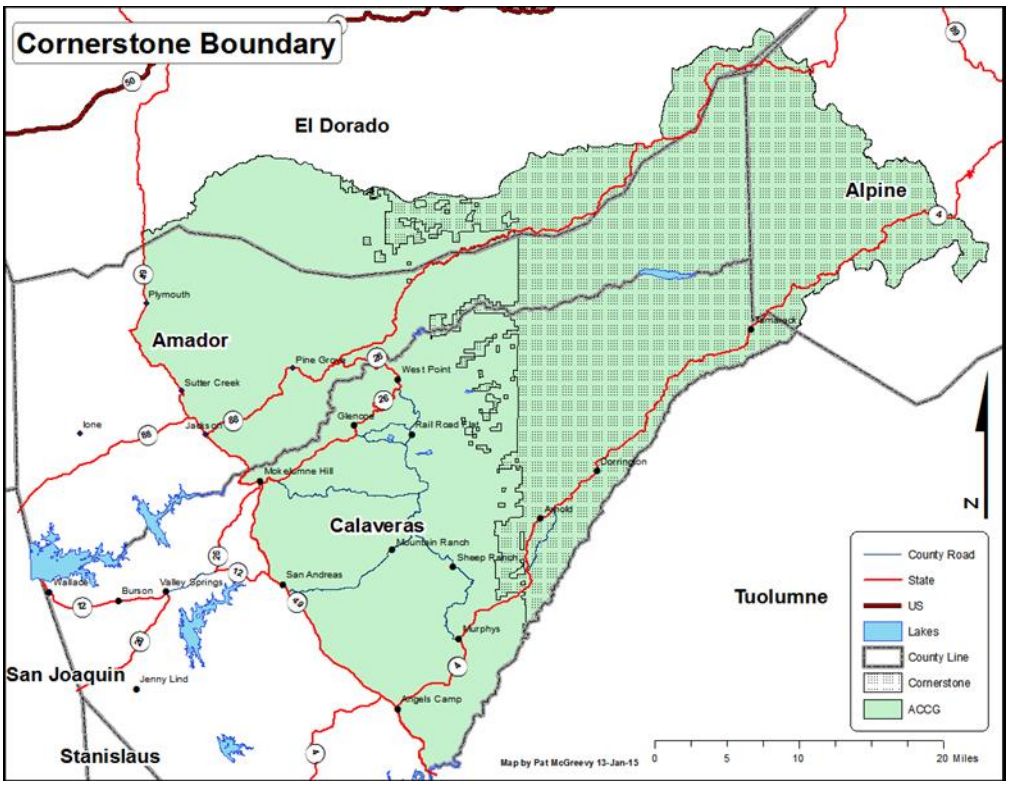
Tree-Thinning Project in Eldorado National Forest Improves Fire Safety, Local Wildlife Habitats
http://www.ledger.news/news/tree-thinning-project-in-eldorado-national-forest-improves-fire-safety/article_e23fa9ec-bf9c-11e9-beff-7bb2a3015067.html

Forest Service using loggers to thin and preserve California's forests
https://www.abc10.com/video/news/forest-service-using-loggers-to-thin-and-preserve-californias-forests/103-8227758

More than $2.5 million in grants for fire recovery announced
http://www.ledger.news/news/more-than-million-in-grants-for-fire-recovery-announced/article_c7f95cee-cf33-11e9-a529-0b0edb2a6be8.html

Can Better Forestry Jobs Prevent Fires and Restore Rural America? A one-of-its-kind nonprofit in Calaveras County has become a model
https://baynature.org/2019/09/09/can-better-forestry-jobs-prevent-fires-and-restore-rural-america/

New Wildfire Alert Cameras to Improve Wildfire Safety in Our Area
http://www.ledger.news/news/local_news/new-wildfire-alert-cameras-to-improve-wildfire-safety-in-our/article_59c8c9a8-621e-11e9-a60a-afa0cf74ad79.html



Date: December 5, 2019

Approved by: _____
LAURENCE CRABTREE
Forest Supervisor
Eldorado National Forest

Approved by: _____
JASON KUIKEN
Forest Supervisor
Stanislaus National Forest

Recommended by: _____
ROBIN K. WALL
Project Coordinator
Eldorado National Forest

Recommended by: _____
JOE ARAGON
Project Coordinator
Stanislaus National Forest

Draft reviewed by: _____
REGINE MILLER
Administrator
Amador Calaveras Consensus Group