**Project Name:** Landscape Analysis of Cornerstone CFLR Project

**Project Description:**

The Collaborative Forest Landscape Restoration (CFLR) program was established under Section 4003(a) of Title IV of the Omnibus Public Land Management Act of 2009, and reflected the premise that the best way to integrate restoration actions on National Forests was to integrate ecological, social, and economic needs. The Amador-Calaveras Consensus Group (ACCG), Cornerstone CFLR project was awarded in February 2012 and concluded in 2022, with the core goal of moving landscapes towards sustainable conditions, reducing uncharacteristic wildfire, restoring a range of ecological functions, and maintaining rural communities and livelihoods. The 390,904-acre Cornerstone Project planning area is nested in a larger 840,316 acre ACCG all-lands planning area. The Cornerstone project has approximately 67,605 acres of restoration treatments planned (Figure 1) that have recently been completed.

One of the requirements under the CFLR funding is to conduct ecological, economic, and social monitoring to record the benefits and lessons learned from restoration efforts in the Cornerstone project area. The Cornerstone Monitoring Strategy was finalized in 2016 and had a focus on project monitoring answering 12 Tier 1 questions, 3 Tier 2 questions, 12 Tier 3 questions, and 3 Tier 4 questions. These questions measure implementation and effectiveness of Cornerstone projects.

The ACCG Monitoring Workgroup has an interest in addressing questions from a landscape scale using new technology (Regional Resource Kits populated with F3 data). Below we provide the Cornerstone monitoring questions to be addressed at the landscape scale. Since the Cornerstone Monitoring Strategy predated the National CFLR guidance we will make sure to consider our updated questions.

**Scale:** Cornerstone (Amador RD, Eldorado NF & Calaveras RD, Stanislaus NF)

**Timeframe:** 2011, 2016, 2021 (or most current landscape)

**Questions to Address:**

| Cornerstone Question | CFLR National Strategy Question | Question | Cornerstone Indicators | RRK Indicators | Data Summaries |
| --- | --- | --- | --- | --- | --- |
| 5 | 2 | How did treatments affect basal area and canopy cover in canyons and slopes with north-facing aspects compared to ridges and slopes with south-facing aspects? | Basal Area; Stratified canopy cover | Basal Area, Percent Canopy Cover | Project Type – FACTS Mechanical, Prescribed Fire, Combination, Plantation Management  Compare the treated areas to the untreated areas by LMU |
| 6 | 2 | How did treatments affect the tree density and species composition in all size classes? | Basal Area; Trees per acre by size class; Species | Basal Area, Density – TPA, Maximum SDI | TPA by Size Class in above comparisons, Comparison by Species |
| 13 | 1 | How did fuel treatments meet the project goals and objectives? | Treatment monitoring (fuel loading, height to live crown, mortality, canopy bulk density, WUI indicators: acres treated) | Recent Fire Severity, Total Dead/Down Fuels, Standing Dead and Ladder Fuels | Project Type – FACTS Mechanical, Prescribed Fire, Combination, Recent Fires |
| 14 | 1 | Will fuel treatments result in future fire behavior consistent with the natural range of variability (size, frequency, pattern, severity)? | Modeled fire behavior; Observed actual fire behavior; Fire Size | Annual Burn Probability, Probability of Fire Severity (Low, Moderate, High), Mean FRID Condition Class | Project Type – FACTS Mechanical, Prescribed Fire, Combination, Recent Fires |
| 16 | n/a | Did project activities improve growing conditions for hardwoods? | Density and range of size of hardwoods; Crown position (domnant trees) | Density – Trees Per Acre by hardwoods, California Black Oak Stands | All Projects filtered by appropriate CHWR types – might not be as fine scale to determine this. |
| 25 | 3 | Did forest treatments impact habitat of mature Forest Sensitive species across projects? | Habitat quality would infer occupancy or detection probability; Canopy closure; Downed logs; Snags; Habitat heterogeneity; Nesting/roosting/ den sites (maintain or enhance large trees, defect trees); Species occupancy. | Percent Canopy Cover, Density – Snags, Density – Large Trees, Fine Scale Heterogeneity Index, California Spotted Owl, Habitat Connectivity | Summaries within HRCAs, territories and PACs and outside of HRCAs, territories and PACs filtered by treatment types |
| 26 | 3 | How many snags per acre by size classes were removed/retained during treatments? | Number of snags by size class | Snags Per Acre | Snags Per Acre by Treatment and No Treatment |