Project ID	Applying Organization & Principal Investigator	Project Title	County	Requested Funds	Brief Project Description	Research Project Type
20-RP-FKU-064	University of Washington Dr. Van R. Kane	Improving predictions of fire impacts after mega drought: Lessons for carbon storage, defending the WUI, and improving resilience and recovery following the 2020 Creek Fire	Fresno	$498,535	Our study will examine the 2020 Creek Fire as an example of a coarse woody debris fuel laden 'mass fire' to examine how pre-fire conditions relate to post-fire changes in forest structure and carbon, how pre-fire vegetation structures surrounding human structures related to their fate in the fire, and what these results suggest for forest management guidelines both to recover from 'mass fires' and for management to lessen the impact of future 'mass fires'.	General
20-RP-LNU-096	University of California, Davis Dr. Derek Young	Using early post-fire dynamics to improve predictions of forest recovery	Yolo	$497,833	Emerging evidence suggests that early (0-2 year post-fire) dynamics, such as delayed mortality, can explain much of the unexplained variation in post-fire regeneration. We will take advantage of the rare research opportunity afforded by the 2020 California wildfires to quantify early post-fire dynamics and their relationship to initial and longer-term regeneration using coupled ground- and drone-based surveys. We will incorporate results into important reforestation decision-making tools.	General
20-RP-LNU-169	University of California, Davis Dr. Troy Magney	Carbon Dynamics Investigator for California: An open-source platform for tracking carbon uptake and storage across California's forests	Research based in Yolo county, analysis Statewide	$291,471	The overarching aim of this project is to understand forest carbon dynamics across California. By combining space-based data, lidar collected from a NASA sensor called GEDI on the International Space Station and solar-induced fluorescence (SIF) from a satellite called TROPOMI, this project will quantify carbon dioxide uptake and carbon storage in California's Forests with consistent, instantaneous, repeated measurements. The project will include an open-source data visualization platform to enable use by foresters and land managers.	General
20-RP-SCU-123	Lawrence Berkeley National Laboratory Dr. Jennifer Holm	A modeling and scenario-planning platform to enhance California's resilience to wildfire and climate change	Yolo	$499,999	This project aims to understand the resilience of CA's forests to climate change and increasing wildfires, and what are the controls on resilience. We will examine how fuel loading and treatments influence model projections of fire behavior with fuel-drought-climate feedbacks under future climate change scenarios. Specifically, how will increasing frequency of wildfire, combined with droughts, affect forest composition, recovery rates, fuel loading, and carbon emissions in CA forest ecosystems?	General

Project ID	Applying Organization & Principal Investigator	Project Title	County	Requested Funds	Brief Project Description	Research Project Type
20-RP-LMU-020	University of California, Berkeley Kathryn Low	Assessing fuels treatment effectiveness: the influence of wildfire on treatment lifespan and aboveground carbon dynamics within 20-year-old treated units	Plumas	$44,883	This project uses temporally rich data to explore the influence of wildfire on forest stand dynamics, treatment effectiveness, and carbon storage in twenty-year old fuels treatments. The study aims to understand the long-term efficacy of current treatment regimes on federal lands while providing California's forest managers with empirical (i.e. not modeled) information about the ability of treatments to reduce fire risk, preserve forest health, and sequester carbon in a post-fire environment.	Graduate Student
20-RP-LNU-047	University of California Davis Ashley Grupenhoff	Plant community response to increased fire frequency in northern California chaparral	Napa	$64,831	Fire frequency has increased in chaparral shrublands with the rise of urbanization and an extended fire season. This departure poses severe effects on biodiversity and species composition, leading to exotic invasion and type conversion to grassland. This study will examine how increased fire frequency affects the composition of plant species in northern chaparral and will provide data to understand how and when chaparral communities lose resilience to invasion, thus informing management, planning, and restoration efforts in this region.	Graduate Student
20-RP-RRU-168	University of California Riverside Elizah Stephens	Effects of wildfire on soil emissions of NO and N2O	Riverside	$99,862	Detailed understandings of the impacts of wildfire on ecosystem biogeochemical cycles are essential for predicting ecosystem recovery trajectories and supporting the protection and restoration of our local fire-affected ecosystems. To address this need, I propose tracking N cycling and measuring soil N gas emissions in the aftermath of the Holy Fire in the Cleveland National Forest.	Graduate Student
20-RP-SCU-163	University of California, Berkeley Micah Elias	Leveraging existing carbon incentive programs to increase utilization of woody biomass residues	Alameda	$100,000	To achieve the goal of restoring one million acres of California's forested land each year, around 30 million tons of woody biomass will need to be removed from landscapes. Strategic investments in biomass utilization infrastructure and facilities will be critical to helping meet these goals. This proposed research will provide a quantitative assessment of the profitability of biomass utilization technologies and the financial impact of existing carbon incentive programs.	Graduate Student

Project ID	Applying Organization & Principal Investigator	Project Title	County	Requested Funds	Brief Project Description	Research Project Type
20-RP-MEU-028	Humboldt State University Dr. John-Pascal Berrill	Mitigating wildfire hazard in the redwoods: effectiveness and tradeoffs of fuels treatments	Mendocino	$500,000	Two-part research project on Jackson Demonstration State Forest: 1. Establish replicated manipulative experiment comparing hazardous fuels reduction treatments including prescribed burning. 2. Using established multicohort silviculture experiment, compare activity fuels treatments following precommercial thinning done 10 years after various conifer partial harvest treatments. These long-term experiments give data into the future, while fire effects modeling for each treatment gives immediate wildfire hazard reduction guidance for north coast.	State Forests
20-RP-SLU-058	Cal Poly Corporation Dr. Richard Cobb	Understanding the costs and limits of vegetation management for wildfire mitigation in coastal California: a comprehensive ecological and economic study at the Soquel Demonstration State Forest	Santa Cruz	$499,513	This project will compare the impacts of commonly applied forest health management approaches to fuels, carbon, and water at the Soquel Demonstration State Forest. We combine these with policy and economic modeling to identify optimal carbon storage and forest health treatments for the coast range.	State Forests
20-RP-FKU-035	Conservation Biology Institute Dr. Wayne Spencer	Applying New Science to Develop a Collaborative Decision Support System for Forest Management in the Southern Sierra Nevada	Fresno	$479,643	This project will advance work currently in progress by a federal/state/non-profit partnership to build a decision-support system for addressing critical forest management issues in the southern Sierra Nevada and apply it to the protection of giant sequoias, Pacific fishers, and mountain communities. The DSS will combine emerging wildfire science, spatial metrics of forest resilience, and forest growth simulation for prioritizing treatments that improve the resilience of natural and human communities to fire and climate change.	Synthesis & Tool Development