CAL FIRE-CCI Forest Healh Research Program -- Grant Solicitation RP-RFP-2023-01 (FY 2023-2024)
List of projects selected for award

Project ID	Applying Organization & Principal Investigator	Project Title	County	Requested Funds	Brief Project Description	Research Project Type
60118424	University of California, Berkeley Yihong Zhu	Assessing the effectiveness of prescribed fire: An empirical approach to quantify the trade-offs	Alameda	$78,118	This project aims to develop the means to quantify the trade-off between wildfire hazard reduction and smoke production from prescribed fires across contemporary forest conditions in the Sierra Nevada, and to provide a systematic overview of the benefits and costs tied to increasing prescribed fire use. Public-available workflow, user-guide, and database will be provided to enhance implementation.	Graduate Student
60164685	University of California, Santa Barbara Leander Anderegg	Defining the mechanisms of recruitment limitation following high severity wildfire to predict California conifer forest resilience in an altered climate	Tulare	$745,781	To avoid post-fire type conversion and design management interventions for post-fire recovery, we need to understand the ecophysiological mechanisms driving widespread conifer recruitment failure. This project will quantify how increased temperature and decreased moisture in high severity burns interact with seedling physiology and seed limitation to drive recruitment failure.	Wildfire and Forest Research (General)
60246854	San Mateo Resource Conservation District David Cowman	Optimizing and Scaling Standardized Forest Treatment and Disturbance Monitoring in the Coast Redwood Region	San Mateo, Santa Cruz	$249,734	This project develops a system-specific forest treatment monitoring framework for the coast redwood region. The framework will be tested across treatment types through establishment of long term monitoring network across the Santa Cruz Mtns. Outcomes include a public protocol/sampling guide that can be used to scale up standardized monitoring and improve treatment efficacy regionally over time.	Special Topics Research
60287912	University of California, Davis Frederik Strabo	Fuel Treatments, Externalities & Collective Action: How do Fuel Treatments on Public Lands Influence Private Landowners?	Statewide	$100,000	This project explores how fuel treatments on public lands influence fuel treatment activity and property values on nearby private lands. To answer these questions, I will compile a spatial and temporal database of public and private fuel treatments, wildfires, and property values across landownerships within California while implementing various economic and statistical models.	Graduate Student

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60380365	University of Washington Van R. Kane	FIA-enhanced - From trees to ecoregion: A synoptic multi-scale assessment of forest risk and opportunities for increased resilience across the Sierra Nevada	Alpine, Amador, Butte, Calaveras, El Dorado, Fresno, Inyo, Kern, Lassen, Madera, Mariposa, Mono, Nevada, Sierra, Tehama, Tuolumne, Yuba	$144,071	Our forests need a roadmap to resilience. Our current funded study will be the 1st to use airborne lidar and imagery to map the risks and opportunities for forest resilience across the entire Sierra Nevada ecoregion at multiple scales. A new partnership with the USDA Forest Service can enhance this effort's impact by combining remote sensing data with the full data of the FIA field plot network.	Wildfire and Forest Research (General)
60382377	Utah State University Brendan Murphy	Predicting burn severity and runoff response for pre-fire watershed assessment in California	Statewide	$746,655	To support the efforts of CAL FIRE Watershed Emergency Response Teams, we will develop a machine learning model to predict burn severity in California, evaluate post-fire streamflows to advance models of runoff response, and ultimately create an integrated geospatial modeling framework for conducting pre-fire assessments of post-wildfire watershed hazard-related risks to California watersheds.	Wildfire and Forest Research (General)
60471423	University of California, Santa Barbara Joe Celebrezze	Using spectral recovery, post-fire climate, and topography to predict vegetation dynamics following high severity wildfire	Fresno, Kern, Tulare	$78,617	As the climate changes and high severity wildfires occur more often, concerns about forest resilience are mounting. By modeling post-fire vegetation dynamics using multispectral, climatic, and topographic data, we intend to address these concerns with products to improve land managers' abilities to identify priority sites for climate-adaptive post-fire reforestation projects in the S. Sierras.	Graduate Student
60507769	California Polytechnic State University-San Luis Obispo Stewart Wilson	Using Artificial Intelligence to Map Soil Burn Severity: Decision Support Tools for Postfire Assessment	Statewide	$749,975	Fire significantly affects soil, impacting forest recovery, carbon sequestration, water quality, and risks of debris flows/flooding. Due to these risks, federal postfire assessment teams generate soil burn severity (SBS) maps on fires greater than 500 acres. We propose SBS.AI, a Geospatial AI tool and platform, to map postfire soil impacts, with potential statewide/national impact.	Synthesis and Tool Development

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60510044	University of Washington Susan Prichard	Improving characterizations of fire severity in reburned areas and non-conifer systems using repeated field surveys and lidar metrics	Lassen, Plumas	$442,549	Using the Dixie Fire area, we plan to quantify the impact of repeated burns using fine-scale lidar-derived metrics to measure fire-caused change. Using robust pre- and post-fire field datasets for validation, we will provide managers and researchers with ecologically relevant fire severity indices. This work will improve assessments of landscape vulnerability following repeated high-severity fire.	Wildfire and Forest Research (General)
60516330	Cal Poly Humboldt Sponsored Programs Foundation John-Pascal Berrill	Bringing Drought-tolerant Redwoods with Superior Growth and Wood Properties into Retail Nursery Production: Assessing Field Tests for Reforestation and Climate Adaptation	Humboldt, Mendocino	$378,138	We propose to re-measure >4,500 redwoods of known origins planted in field experiments designed to find superior redwoods for timber and climate resilience goals, then thin the experiments and dissect cut trees for wood quality testing. Sprouts arising from stumps of cut redwoods exhibiting superior growth and wood quality will be deployed to a forest nursery for propagation and retail sale.	Demonstration State Forest Research
60517602	University of California Davis Tessa Putz	Exploring the Effects and Effectiveness of Pile Burning: A Review	Statewide	$88,873	Land managers often rely on pile burning to achieve fuel reduction goals, yet there are risks associated with piling forest biomass. Despite having widespread use, a comprehensive understanding of the effects and effectiveness of pile burning in the western US does not exist. We will evaluate these tradeoffs by synthesizing the current state of pile burning literature to aid vegetation management.	Graduate Student
60577899	North Carolina State University Olakunle Sodiya	Identifying potential locations for expanded, reactivated and new wood processing facilities to improve financial prospects and prioritize wildfire risk mitigation funding in the Priority Investment Landscapes of California, United States	Statewide	$84,926	This project will identify Priority Investment Landscapes (PILs), quantify potential biomass volumes from vegetation management and wildfire fuel reduction treatments in these landscapes, and assess the role of existing market infrastructure to reveal areas where additional facilities could support active forest management for the next 20 – 30 years.	Graduate Student
60598312	University of California, Berkeley John Battles	Quantifying fuel across multiple spatial scales and its impact on wildfire behavior and severity in California forests	Alameda	$511,176	We confront our proven inability to predict contemporary wildfire dynamics. We do not understand how heavy fuel loads and extreme fire weather interact to create “mass fire” behavior. This inability leaves managers with a critical information gap. We propose to close this gap by supporting an ongoing collaboration of scientists and managers that is building the next generation of fire models.	Wildfire and Forest Research (General)
Number of Awards: 13					**Total Funding Requested: $4,398,613**	

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