Forest Health Research Program

California Climate Investments are programs funded by the Greenhouse Gas Reduction Fund using proceeds from the State's cap-and-trade program.

The CAL FIRE Forest Health Research Program supports scientific studies that provide critical information and tools to forest landowners, resource agencies, fire management organizations and policy makers across California on a variety of topics related to forest health and management.

The Research Program offers grants to eligible applicants primarily through an annual **competitive proposal and selection process**, as well as through discretionary awards and contracts for specific topics of interest to the Department. To date, the Research Program has funded over $7.3 million in research grants.

Priority topics for study are identified for each round of grant funding; currently funded projects are focused on:

- Implementation, effectiveness and impacts of significantly increased pace and scale of fuel reduction and forest health treatments, including prescribed fire;
- Utilization of forest residues and forest products related to fuel reduction and forest health treatments;
- Wildfire impacts, recovery and resilience in an altered future climate;
- Wildfire mechanics, spread and associated impacts in wildland-urban interface landscapes;
- Natural, historical and contemporary range of variation in fire regimes and wildfire-related greenhouse gas emissions.

The Research Program budget allocates grant funding to **four different project types:**

- Projects on CAL FIRE Demonstration State Forests;
- Projects on other forestland in California;
- Graduate student research;
- Scientific synthesis and tool development.

The Forest Health Research Program is funded through the California Climate Investments program (Greenhouse Gas Reduction Fund) and managed by the Fire and Resource Assessment Program at CAL FIRE. Additional opportunities for research funding are available through other CAL FIRE programs.

For more information, please contact the CAL FIRE Fire and Resource Assessment Program (FRAP). FHResearch@fire.ca.gov | (916) 327-3939 | https://frap.fire.ca.gov/

Forest Health Research Program – Research Grants Awarded 2018-2020

Award Type	Organization	Project Title	Principal Investigator	Total Funding
FY 2018-19 Awards				
General	University of California, Berkeley	Keeping fire on the landscape: Consequences for carbon balance and forest resilience	John Battles, Ph.D.	$454,772
General	University of New Mexico	The Carbon Consequences of Catchment-Scale Prescribed Burning	Matthew Hurteau, Ph.D.	$396,089
General	University of California, Davis	Impacts of Wildfire and Climate on Ecosystem Services in Southern California: Tool Development and Data Needs	Emma Underwood, Ph.D.	$285,599
State Forests	University of California, Davis	Effects of salvage logging on the resilience and successional trajectory of high-mortality forests	Rebecca Wayman	$457,596
State Forests	University of California, Davis	Using UAV's and Big Data to Map Live Trees and Predict Postfire Regeneration	Derek Young, Ph.D.	$222,165
State Forests	Sonoma State University	Evaluating plot-level remote sensing tools to increase accuracy and efficiency of fuels management approaches	Lisa Bentley, Ph.D.	$448,552
State Forests	University of California, ANR	Decentralized biomass torrefaction to reduce cost and improve utilization of woody biomass	Daniel Sanchez, Ph.D.	$353,876
Grad Student	University of California, Berkeley	What's the baseline? Carbon storage in a northern California mixed-conifer forest before fire suppression policies	Clarke Knight (Grad Student)	$60,528
Grad Student	University of California, Davis	Threats for Carbon Storage in High Montane Forests in the Sierra Nevada	Sara Winsemius (Grad Student)	$66,892
Grad Student	University of California, Davis	Tree recruitment and forest expansion following reforestation	Tara Ursell (Grad Student)	$61,250
FY 2019-20 Awards				
General	University of California, Berkeley	Implications of increasing the scale of managed wildfire on forest carbon stocks and pyrodiversity	Scott Stephens, Ph.D.	$422,391
General	University of New Mexico	The carbon consequences of catchment-scale prescribed burning, post-treatment	Matthew Hurteau, Ph.D.	$499,934
General	University of Nevada, Reno	Assessing smoke-plume injection height as a function of sub-canopy wind convergence of prescribed burns in the Central Sierra Nevada	Stephen Drake, Ph.D.	$171,145
General	Sequoia Foundation	Public health effects of increased prescribed burns for wildfire management	Sumi Hoshiko, MPH	$504,496
General	Michigan State University	Evaluating forest resilience and carbon recovery using a chronosequence of co-located pre-, active-, and post-wildfire measurements in California mixed-conifer forests	Jessica Miesel, Ph.D.	$453,078
General	San Jose State University	Effectiveness and optimization of forest fuels reductions for biodiversity conservation in a changing Sierra Nevada ecosystem	M. Zachariah Peery, Ph.D.	$499,825
State Forests	University of California, Berkeley	Simulating the heterogeneous consequences of widespread forest health treatments for California mixed conifer forest resilience to climate change and wildfire	Lara Kueppers, Ph.D.	$499,660
State Forests	University of Nevada, Reno	Sierra Nevada-wide provenance trials to support climate-based seed zones and reforestation efforts	Sarah Bisbing, Ph.D.	$499,745
Grad Student	University of California, Santa Cruz	A physiological approach to assess the resilience of Sierra Nevada forest communities following prescribed burns	Ryan Salladay (Grad Student)	$88,238
Grad Student	University of California, Davis	Vulnerability in California's carbon stocks: understanding post-fire regeneration in the state's high elevation forests	Emily Brodie (Grad Student)	$53,836
Synthesis & Tool Dev.	Lawrence Berkeley National Lab	Development of rapid-response post-wildfire water quality sampling guidelines to determine watershed and natural resource asset conditions and priorities for future recovery	Michelle Newcomer, Ph.D.	$50,000
Synthesis & Tool Dev.	University of Washington	Addressing common misconceptions about dry forest restoration and fuel treatments	Susan Prichard, Ph.D.	$54,369
General	Pepperwood Foundation	Vegetation Trends and Cycles in the Fire-Prone Landscapes of Lake, Napa, and Sonoma Counties	Tosha Comendant	$210,009
General	University of California, Davis	Measuring wildfire impacts and post-fire recovery of shrubland biomass under different climate conditions	Emma Underwood, Ph.D.	$333,869