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