Internship Experience, Summer 2021

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CLIMATE ADAPTATION SCIENCE

UtahState University

Host

UC DAVIS
UNIVERSITY OF CALIFORNIA

FOREST SERVICE · US · DEPARTMENT OF AGRICULTURE

Mentor

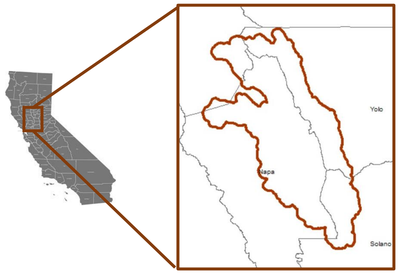
Dr. Hugh Safford

USDA Forest Service Region 5 Regional Ecologist/Affiliate Faculty UC Davis

Project

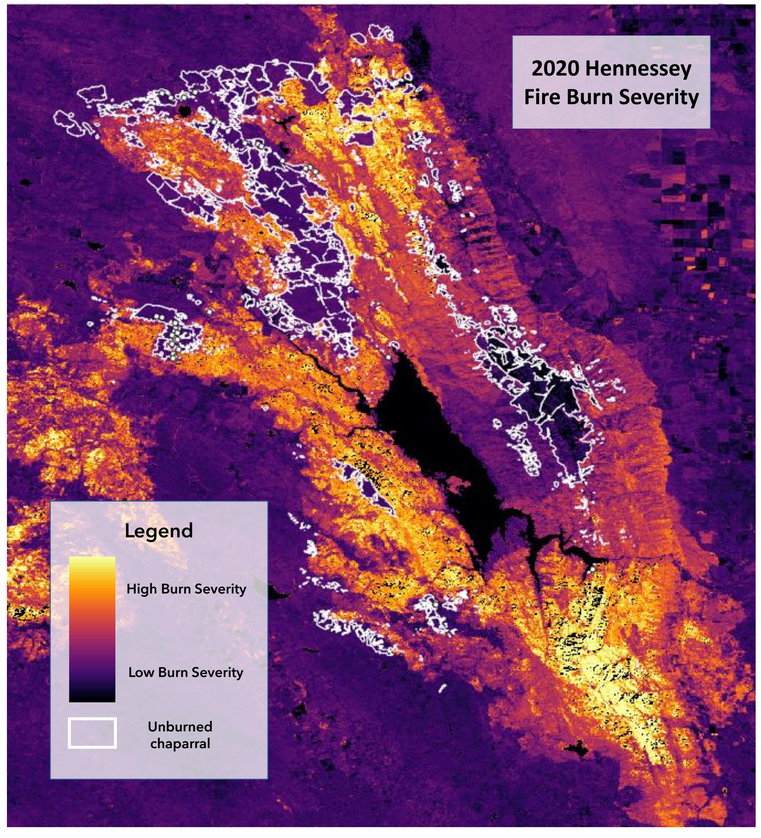
Identify areas of unburned chaparral to assess accuracy of current fire severity maps derived from satellite imagery.

Study area: The 2020 Hennessey fire complex, part of the larger LNU fire complex



Results

- Produced GIS spatial layer of unburned chaparral identified from Google Earth Pro imagery
- Sampled 330 locations in the field for vegetation id and burn severity
- Generated confusion matrix to determine the success of imagery classification



Climate Adaptation

This study contributed to current knowledge about post-fire severity mapping. It supported the leading dNBR fire severity model used by scientists. California's fire regime is shifting to a state of more severe and frequent wildfires. It is important to study post-fire severity because there is much to be learned about how chaparral forests are adapting to these new fire conditions.

Skills and Tools

Google Earth Pro

ArcGIS Pro

ArcGIS Collector

	Positive (1)	Negative (0)
Positive (1)	TP	FP
Negative (0)	FN	TN

Statistical Analysis

Post-fire vegetation measurements

Accuracy assessment survey