Forest Health Research Program Grantee Webinar:

Mechanistic Modeling for Future Forest Management: Predicting Vegetation Shifts in a Dry Mixed Conifer Forest

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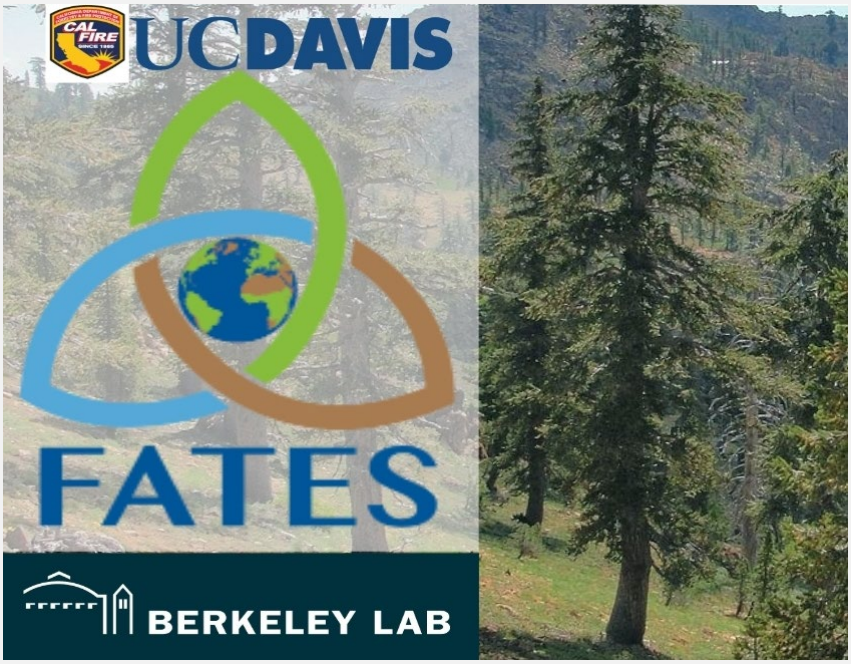

Tuesday, June 25, 2024
2:00 pm – 3:00 pm
Register here

Abstract: Predicting future vegetation change in California's Sierra Nevada is crucial for forest management, but prior predictions are not sufficiently mechanistic for decision making. We apply a leading vegetation demographic model, which represents plant physiology, competition, and demography, to predict changes in conifer, oak, and shrub dominance in a dry mixed conifer forest under future climate (2015-2098; SSP3-7.0) and alternative management scenarios. We find that future competitive dynamics shift in favor of oaks over conifers and that long-term efficacy of thinning and fuels reduction treatments depends on stand structure, composition and key vegetation parameters.

Adam Hanbury-Brown is an ecosystem modeler and forest ecologist pursuing postdoctoral research in the Latimer Lab at UC Davis. His research uses a leading vegetation demographic model, the Functionally Assembled Terrestrial Ecosystem Simulator (FATES), to predict changes in forest structure, composition, and function in mixed conifer forests in the Sierra Nevada.

The Forest Health Research Program is part of California Climate Investments, a statewide initiative that puts billions of Cap-and-Trade dollars to work reducing greenhouse gas emissions, strengthening the economy, and improving public health and the environment — particularly in disadvantaged communities.

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