These data were simulated using the LANDIS-II model with the Century Succession extension (v3.1.1), the Dynamic Leaf Biomass Fuel extension (v2.0), and the Dynamic Fire extension (v.2.0.5). We used CMIP3 projections, driven by the A2 emission scenario, from CNRM, CCSM3, GFDL. The study area includes three transects across the Sierra Nevada Mountains of California. The transects are labeled as North, Middle, South. The objective of the study was to account for the effects of climate on fuel flammability (static) and the effects of climate on fuel flammability combined with the effects of climate and prior wildfire events on fuel availability (dynamic).

The data are organized as follows: The directory includes folders for Emissions, Fire Size, Severity, and TEC. Within each directory is the R code for processing the data and generating the figures in the manuscript Hurteau et al.

Emissions: These data represent the area-weighted mean results of emissions from simulated wildfires. The units are g/m2/yr. The file naming convention is Transect (N, M, S), fire simulation type (Stat, Dyn), and emission species (CH4, CO, CO2, OA, PM).

Fire Size: Area Burned: The csv files in the main directory are the summarized data from the simulations. Each transect includes 10 replicate simulations for each climate projection (n=30). The columns are labeled 1-10 for each climate projection. The climate projections are ordered as follows: the first 10 are CNRM, the second 10 are CCSM3, the third 10 are GFDL. The file naming convetion is Transect (n, m, s), fire simulation type (stat, dyn), followed by AB for area burned. The units are total area burned (km2) for each time-step in each simulation.

Fire Size Distributions: In the Fire Size folder are folders that include all of the burnlogs generated by the Dynamic Fire extension for each of the simulations. The folders are labeled by transect (north, middle, south) and fire simulation type (stat, dyn). The burnlogs are labeled by Transect (n, m, s), burnlog, number. The numbers were appended to the original files. Numbers 1-10 are from CNRM, 11-20 are from CCSM3, 21-30 are from GFDL. The script pulls the values in the TotalSitesInEvent column. This represents the number of gridcells burned. The gridcells were 150m x 150m, making them equivalent to 2.25 ha.

Severity: The severity directory includes folders for each transect and fire simulation type. Within a folder are the raster data for each time-step from each replicate simulation for each of the three climate projections. There are 30 raster layers for each time-step. The raster layers represent fire severity for a fire event that occurred within a given gridcell during that time step. The fire severity values in the model output have all had 2 added to them. Subtracting 2 from each value results in a fire severity scale ranging from 0-5. A zero value = no fire. Values of 1-2 = surface fire. A value of 3 = some tree torching. A value of 4 = tree torching and some crowning. A value of 5 = crown fire (stand-replacing fire).

TEC: Within the TEC folder are csv files for each transect by fire simulation

type combination. The values are total ecosystem carbon (TEC) in Mg/ha. The Century Succession extension outputs area-weighted mean aboveground biomass (AGB) and soil carbon (SoilC) values for each time-step.
The values in the csv files in this directory are the combination (AGB*0.5 + SoilC). Within each csv are the results form the 10 replicate simulations from each climate projection. The climate projections are ordered as follows: the first 10 are CNRM, the second 10 are CCSM3, the third 10 are GFDL.