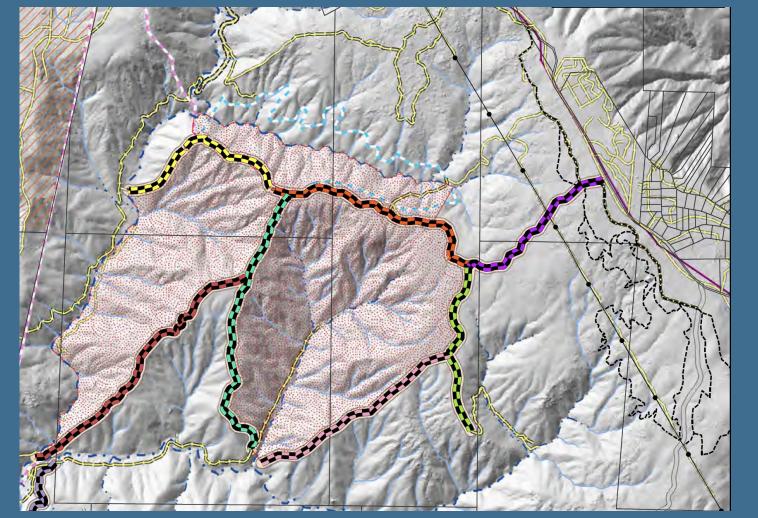
### Vegetation Management Lessons Learned from CZU

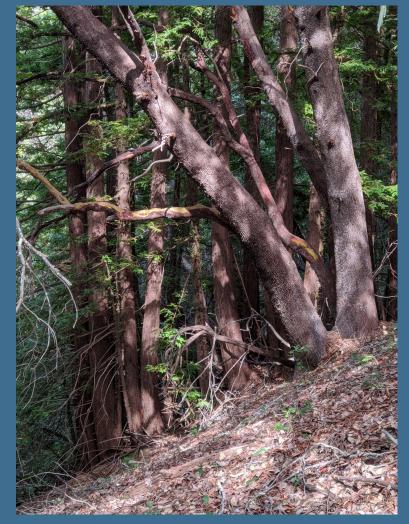
Life is full of surprises joe@bdfsc.org





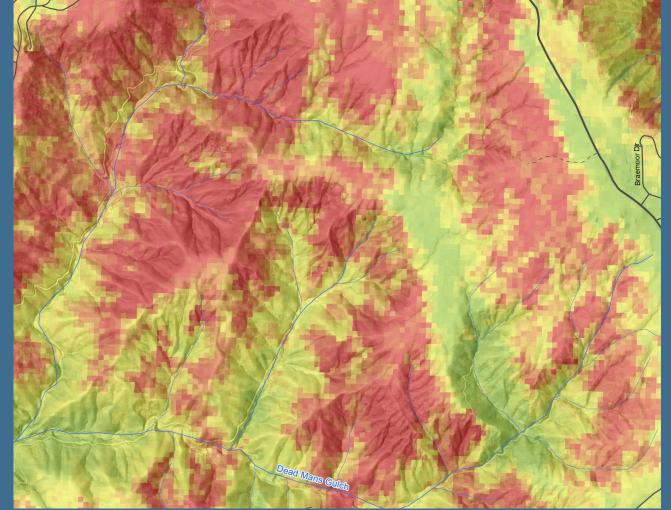
What we thought we'd do in 2017 was return fire to a landscape, which burned in the Lockheed Fire just less than a decade before, and had densely regrown.











Fate took over in 2020, when fire returned with a vengeance, taking our tools and much of the prior landscape with it.

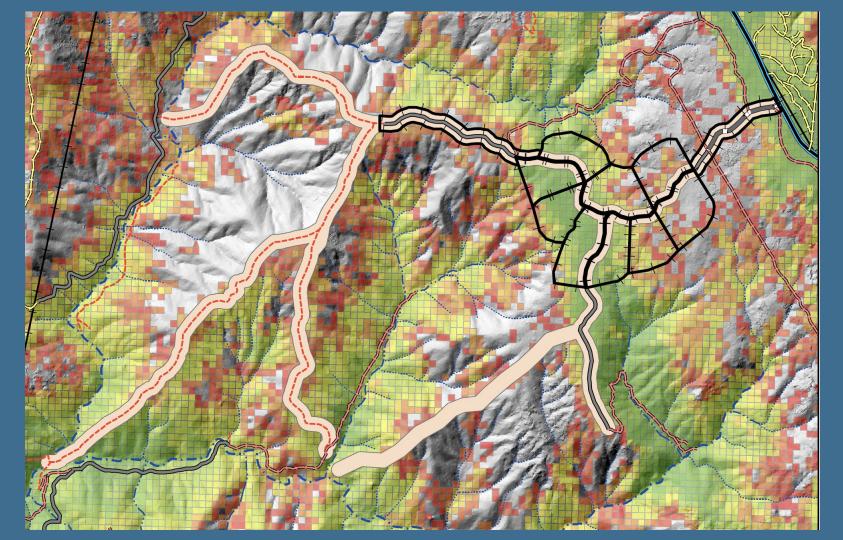


## So, we had to rescope the following spring











The Lockheed Fire jumped from ridge to ridge, which burned with highest intensity. CZU didn't burn with comparable intensity on ridges, but moonscaped redwood canyons.



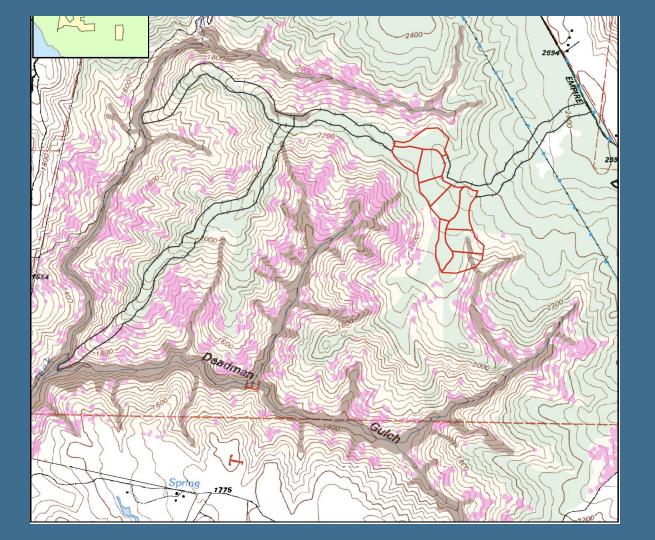




#### Challenges of rescoping budget

- Budget categories were fixed by funder
- We couldn't know the extent and effects of post CZU mortality
- Vegetation type changes
- · Rates of regrowth













#### Challenges of contracting

- · Resource saturation
- · Processing burnt dead trees
- New tools and techniques required
- · Rescoping again and again and again ...



# Yet Another Rescoping in 2022 Direct Award to Continue Work Many Thanks

- To Rich Sampson, CZU Unit Forester, and Joy Tucker, Captain of CAL FIRE Northern Region Fire Prevention Grants for second grant
- to Angela Bernheisel for Air Curtain Burner inspiration and 1st ACB
- and to Rich again for getting us 2nd and 3rd.



#### A Nightmare Scenario 1,000 & 10,000 hour fuels in heavy brush

- 1. Stephens, et al (2022) Mass fire behavior created by extensive tree mortality and high tree density not predicted by operational fire behavior models in the southern Sierra Nevada. Forest Ecology and Management 518 p.120258
- 2. Countryman (1964) Mass Fires and fire behavior. US Forest Service Research Paper PSW-19



