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1 October 2018

To: Santa Barbara County Board of Supervisors  
Re: Hearing, October 2, 2018 - Agenda Item #5 (18-00776)  
From: Dr. Tom Dudley, Research Biologist & Director, Riparian Invasion Research Lab, UCSB-MSI  
  
Re: Fuels Management and Community Defensible Space

I feel it is important to provide input concerning the serious issues related to reducing wildfire risks in the Santa Barbara region, as a scientist conducting research involving fire dynamics and as a resident of Painted Cave, a community exposed to and aware of the threats posed by wildfire.

To be brief, I have three points to make and will leave other critical issues to other respondents.

**1. "Fuelbreaks" or vegetation removal from ridges and access routes:**

The physical removal of native vegetation does not have scientific validation, as Syphard et al.'s studies have shown that so-called 'fuelbreaks' infrequently provide the benefits that are promoted. In fact, in areas subjected to vegetation removal by mechanical, chemical, or prescribed fire, these treatments are well-known to promote the expansion of weedy plants such as red brome, wild oats, star-thistle, Spanish broom and other non-native species that are far more flammable than the native chaparral shrubs they replace. These are more likely to ignite from human-related sources (cigarettes, car exhaust, downed power lines) than the native chaparral species. The proposed vegetation treatments may modestly reduce fire severity but greatly increase likelihood of ignitions, so human-caused ignitions (over 90% of regional fires) will only increase with removal of native vegetation. Case in point: about 8 years ago a vehicle-related fire started in weedy grasses and forbs along East Camino Cielo near our home and burned about 4 acres before fizzling out when the flames reached mature chaparral vegetation – it is hard to start mature chaparral plants on fire, requiring a substantial amount of pre-heating before these shrubs ignite. Ridgelines and access roads are where fires start.

**2. Prescribed fire for vegetation management:**

In some situations prescribed fire can work, and I use prescription fire in our research and ecosystem restoration to reduce flammable weed biomass and promote recovery of native, more fire-resistant vegetation. But managed fire is no longer appropriate in chaparral systems, having been used historically by USFS and others and abandoned several decades ago owing to the costs, regulatory constraints and air quality, ineffective results and proximity to urban areas. Those constraints have only increased, so it is illogical to return to an abandoned policy. Learn from past mistakes, don't repeat them.

**3. Focus on human structures outward, rather than shrublands inward approaches:**

Structures burn when not adequately prepared to resist fire, and data show that clearance beyond ca. 100 feet has no influence on probability of their burning. It is captured embers, not heat from fire that burns houses, so clearance further away is ineffective. Landscape-level clearing further promotes the same weedy species as noted above that ignite more readily, and subsequently carry fire much faster into developed areas. We do not need expensive welfare for equipment operators and fire personnel to degrade the areas proposed for further clearing -- we need logical and cost-effective strategies that reduce threats adjacent to communities.

Respectfully,

A handwritten signature in black ink, appearing to read "Tom Dudley".