

To the San Diego Fire Recovery Network,

1/26/04

This letter is in response to the San Diego County Wildland Fire Task Force Findings and Recommendations August 13, 2003 report entitled "Mitigation Strategies for Reducing Wildland Fire Risks" as prepared for the San Diego County Board of Supervisors. We were disturbed by the way our research findings were completely mischaracterized in this report on page 8. Not only are the specific statements about our findings completely false, but also, more generally, our research does not support the claims and recommendations of this section of the report.

We turn first to the three sentences on page 8 of the report specifically pertaining to our research. These three sentences contain a host of mistakes. The report states:

At UCLA, two mathematicians (Peng and Schoenburg) analyzed the Los Angeles Malibu fire regime from a statistical and physics perspective. They were aware of the debate over fuel-driven fires versus wind-driven fires and they concluded that, statistically, fuel was the limiting factor. Their illustration below provides a dramatic illustration of the difference between a landscape shaped with almost no fire suppression activity in Baja California compared to San Diego County's landscape, where highly efficient fire suppression forces are employed.

The first sentence contains some strange minor errors. We are not mathematicians, but statisticians (statistics and mathematics have been separate departments at UCLA since 1998). Schoenberg's name is mis-spelled. We analyzed fires in Los Angeles County, not specifically Malibu. We did not use a physics perspective.

The second sentence contains more serious errors. We never concluded that fuel was a more significant or "limiting" factor compared to wind. We assume the report is referring to either our International Journal of Wildland Fire (IJWF) paper or our Environmetrics paper which is still in review but available as a preprint online (it is difficult to tell which paper since we are not listed in the bibliography). In both of these reports we stated our belief that wind is a very significant factor in wildfire risk, and at no time did we ever claim that fuel age was a more significant factor. In fact there is to our knowledge no basis whatsoever for such a claim. In our IJWF paper we stated that fuel age and wind both seem to be risk factors for monthly area burned, but we never statistically analyzed wind at all, because, as we said in our Discussion, "Wind is known to have a particularly pronounced impact on fire incidence and spread (e.g. Viegas 1998), but wind data is not amenable to the type of analysis performed here.... Hence the analysis of the effect of wind on burn area requires a fundamentally different type of analysis than that employed here." In the Environmetrics paper, we again do not analyze wind at all, and we say in the Conclusions, "The focus on fuel age by no means is meant to underemphasize the importance of other factors in influencing fire risk. These other factors include land use policies, population density, and fire prevention policies, as well as meteorological and topographic variables.... [W]ind is a major factor affecting the size of wildfires. Large catastrophic fires are often driven by high winds and are generally immune to fire suppression."

Regarding the third sentence, the illustration in Fig. 5 is not ours but that of Minnich (1983), and in our Environmetrics paper we state "Despite the fact that Minnich's paper was highly

influential and was used as a support for modern prescribed burning policies, many other works contradict his findings." We then refer to Van Wagner (1978), Johnson and Larsen (1991), and especially Keeley, Fotheringham and Morais (1999), all of whose findings contradict the conclusions of Minnich (1983).

In our research, our main conclusion regarding fuel age and its role in wildfire hazard is simply that wildfire risk does not appear to increase linearly with fuel age, but instead seems to level off after a certain age. In other words, extremely old fuel does not correspond to extremely high burn risk. As we conclude in our IJWF paper, "A possible interpretation is that large wildfires occur primarily when conditions for their ignition are ripe, but that there is little distinction in terms of wildfire risk between conditions that are sufficient for wildfires and those that are extreme. Ours is somewhat similar to the conclusion arrived at by Keeley et al. (1999), who found that large catastrophic wildfires in Southern California 'are not dependent on ancient stands of brush.'"

Thank you for allowing us to clarify our position.

Frederic Paik Schoenberg
Roger Dean Peng