

Fuel Management in Relation to Wildland Fire Prevention: A New and/or Old Concept?

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You cannot prevent fires. You can only prevent small ones becoming big ones.
Taylor (1989)

I think what Taylor (1989) meant to say was that “You cannot necessarily prevent all fires from occurring. You can only possibly prevent some small initiating fires from becoming big fires”. While every human-caused wildfire should technically be regarded as a fire prevention failure, it’s unlikely that wildland fire management agencies will ever completely eliminate both the sources and resultant ignitions associated with such fire occurrences. Complete and total fire exclusion is thus not a realistic goal, especially when we throw lightning (i.e., natural causes) into the mix.

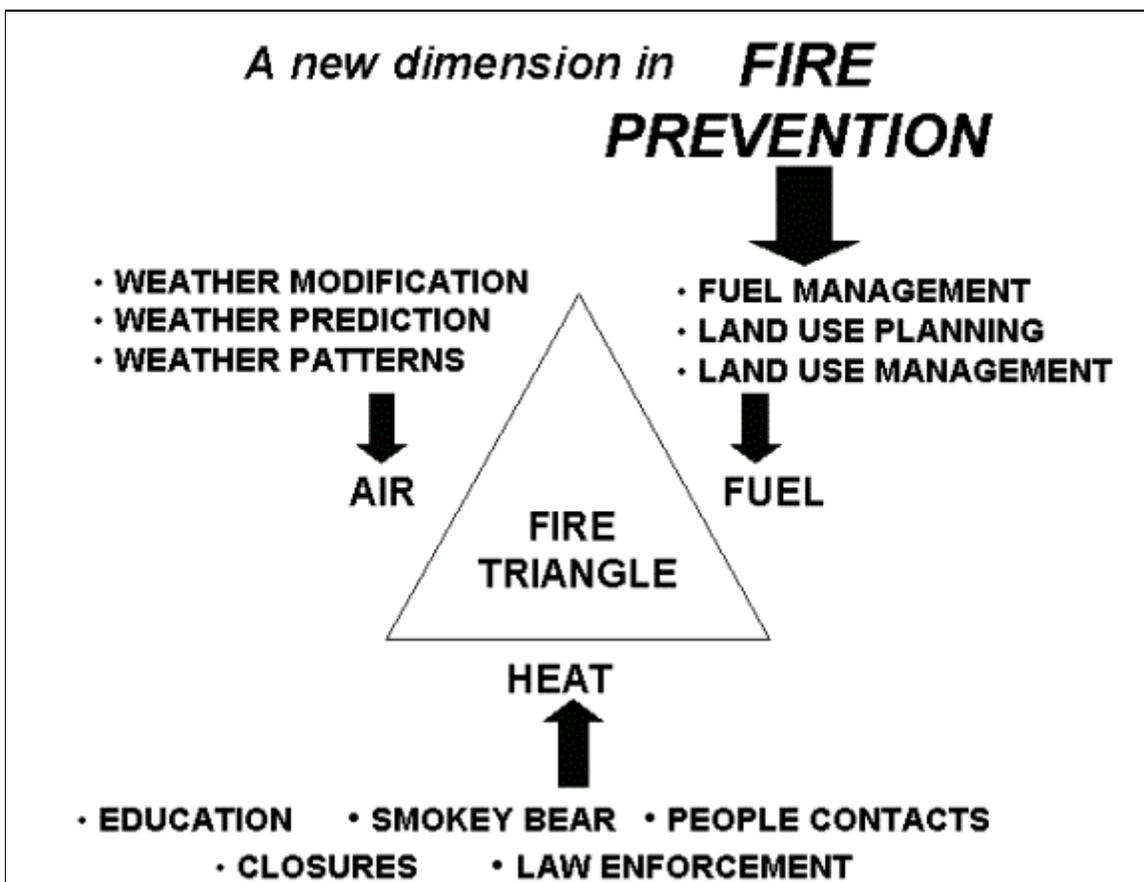
Wildland fire prevention has traditionally focused on the three E’s – education, enforcement and engineering (Riebold 1957) with most of the effort being devoted to the first one (Doolittle et al. 1976). The following passage and accompanying diagram are taken from a short article that appeared in *Fire Management Notes* many years ago (Editor 1973):

An exciting new dimension is developing in fire prevention: action programs taking aim at the FUEL side of the fire triangle.

Up to now focus has been on the HEAT side of the triangle. As the diagram shows, the traditional prevention programs has consisted mainly of efforts to alter people's behavior.

AIR, or weather, being the least known side of the triangle, has received emphasis from research.

The new opportunity lies in attacking the third side of the triangle – Fuel. Fuel management, usually considered mostly as an aid to suppression, is actually fire prevention of the highest order. Lowering the flammability of the forest through fuel management is becoming the great new dimension of fire prevention.



I consider that the author of this article was actually quite a head of his or her time as I've never discovered any evidence that the philosophy as advocated in the article as it pertains specifically to the field of wildland fire prevention was ever widely publicized let alone implemented. In my humble opinion, this was a rather subtle concept, and does represent an added new dimension to traditional wildland fire prevention. As I see it, the author was not suggesting that fuel management could prevent ignitions or new fire starts from occurring but rather that fuel management could eliminate some (but perhaps not necessarily all) of the larger, more damaging fires (i.e., conflagrations) by increasing the initial attack success rate (Alexander 2003a), thereby enhancing the safety of both wildland firefighters and the public at large (Alexander 2003b), and minimizing the adverse impacts of unwanted fires (including high suppression costs). In other words, one of the benefits of a fuel management program is in reducing the incidence of large fire occurrences and this should be viewed as a entirely different perspective with respect to wildland fire prevention.

Brackebusch (1973) pointed out that "some people view fuel management as a substitute or an alternative to aggressive fire control. Not so! Fuel management does not diminish the need for efficient fire suppression. It is integral to and improves fire control success." He went on to enunciate the fact that the creation of favorable vegetation or fuel type mosaic is useless unless a strong suppression force is available to deliver an effective high-speed initial attack (Alexander 2000). As he points out, "If the fire control organization cannot take advantage of the delay in fire spread or fire build-up which results from fuel mosaics, then the risk of runaway fires is still high. Even so, in spite of good fuel management, there will be times when weather conditions permit fires to become uncontrollable."

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