



Wildfire Threat Reduction Through Vegetation Management

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Many areas in the western United States are high wildfire hazard environments. These areas possess the ingredients necessary to support large, intense, and uncontrollable wildfires. When this type of wildfire occurs, the result can be deterioration of watershed function, damage to wildlife habitat, destruction of property, and loss of human life.

There are three factors which influence wildfire behavior – weather, topography, and fuels. If the goal is to reduce wildfire intensity and improve our ability to control a fire, one of these three factors must be modified. Unfortunately, there is little that can be done to change the weather or topography. Consequently, our opportunities to reduce the wildfire threat lie in the modification of fuels.

In the case of wildfire, fuel is typically synonymous with vegetation. Through appropriate manipulation of vegetation, a wildfire can be made to burn slower, cooler, for less time, and with shorter flames. This can be accomplished by reducing the amount, decreasing the height, altering the arrangement, and increasing the moisture content of vegetation available for burning.

There are a variety of techniques or tools available to accomplish vegetation management for wildfire threat reduction. Most of these fall into the following categories.

Mechanical: These approaches utilize hand tools and powered equipment to cut, mow, chip, grind, disc, and plow vegetation.

Burning: Prescribed fire is the intentional and controlled use of fire to modify fuels.

Livestock Grazing: Depending upon the type of vegetation, season, topography, and other factors, domestic livestock can be used to consume fuels.


Herbicides: Herbicides can be used to somewhat selectively or non-selectively to eliminate or control fuels.

Greenstripping: The replacement of hazardous vegetation with less flammable plant materials is another option.

None of these techniques is a panacea...each has advantages and disadvantages. The appropriateness of a technique for any given site will vary by vegetation type, scale of treatment (e.g., around a home, a community fuelbreak, or landscape level), cost, potential for weed establishment, public receptiveness, and other factors.

In summary, the western U.S. will continue to experience intense and uncontrollable wildfires. We have two choices: either we resign ourselves to live with the consequences of high intensity wildfires, or we become actively involved in the management of fuels.

Source: Smith, E.G. 2000. Wildfire Threat Reduction through Vegetation Management: An Overview. Networker – A Publication of the Watershed management Council. Winter 2000. 16p.

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