

The Fire Environment

Today, researchers are studying the fire environment in great detail. They're gaining knowledge and understanding about the complex inter-relationships between man and nature.

Fire experts have long-recognized three basic components: weather, fuel and terrain (things that burn).

Together, these three items affect the likelihood of fire starting, how fast it moves, its power and difficulty to control.

WEATHER

Dry, hot and windy weather increases the likelihood of a major wildfire. These conditions:

- make ignition easier
- help fuels burn more rapidly
- increase fire intensity

High windspeeds, in particular, can transform a small, easily controlled fire into a catastrophic event.

FUEL

Fuel is required for any fire to burn. In a wildfire, fuels are usually living vegetation (trees, shrubs, brush, grass) and dead plant materials (dead trees, dried grass, fallen branches, etc.) Homes, when in the path of wildfire, can become fuel. The quantity, size, moisture content, arrangement and other fuel characteristics influence the ease of ignition, rate of fire spread, length of flames and other fire behavior.

TERRAIN

Of the topographic features, steepness of slope is among the most influential on fire behavior. The steeper the slope, the faster a fire will spread. Other important factors are

- "aspect"—south and southwest slopes usually have more fires
- "chimneys"—steep, narrow drainage

ENDANGERED SPECIES

Federal and state regulations have been established to protect rare and endangered plants and animals that live in wildfire country. Whenever there is any doubt about clearing or thinning native brush, the US Fish and Wildlife Service and State Fish and Game Department should be consulted.

HUMAN ENVIRONMENT

As people move into wildfire country, the human-built environment becomes important in predicting loss of life and property.

- Combustible construction, especially roofs
- Narrow roads, limited access
- Lack of fire-wise landscaping
- Inadequate water supply
- Poorly planned subdivisions

are examples of increased risk to people living with the threat of wildfire.

