

Fire! (cont'd)

community, such as chamise and manzanita, contain flammable resins in their leaves. In addition, their leaves are small, adding to their flammability.

Chaparral plants sprout quickly and grow rapidly. This rapid growth, along with the ability to produce heat-resistant seeds that remain dormant in ground litter for long periods of time, contributes to the ability of chaparral to recover quickly following fire. With age, chaparral plants become less productive but are not replaced by invading species. Thus, fire in this type of community, serves to replace older plants with younger ones of the same species. Furthermore, many nutrients are locked in the foliage of the chaparral plants. Through burning, these nutrients are recycled back into the soil.

Fire Classifications

Fires usually are classified as either natural or human-caused. Natural fires may be managed, monitored, or contained and extinguished. Initially, lightning was the match that ignited fires. Later, humans became the catalyst. Today, approximately ten percent of all wildfires in the United States are started by lightning strikes. Humans cause the rest.

Ground Fires --- burn organic matter in the soil beneath the surface and are sustained by glowing combustion.

Surface Fires --- spread with a flaming front and burn leaf litter, fallen branches and other fuels located at ground level.

Crown Fires --- burn through the top layer of foliage on a tree canopy or crown. These are the most intense type of fire and often the most difficult to contain. They need strong winds, steep slopes, and a heavy fuel load to continue burning.

Prescribed Fires --- set by humans, for the purpose of managing landscapes. This might reduce fuel buildup, increase vegetative succession in some ecosystems, or remove non-native species. Prescribed fire is one of the most effective tools in preventing the outbreak and spread of wildfires.

Fire is a Cultural Symbol

Fire has been a symbol of great significance for many cultures throughout the world. The mythology of ancient Egypt contained a large, magnificently colored bird named the Phoenix that lived to almost 600 years. At the end of its life, the great creature built a funeral pyre (fire) and immolated itself. From the funeral ashes a new Phoenix emerged with the freshness of youth to live out another cycle of life, death and rebirth.

Another mythical story from Italy tells of the guardian priest, the King of the Wood, who was regarded as the spirit of vegetation and endowed with the power to make trees bear fruit. It was believed that the ritual killing of the priest was the only way of preserving the spirit from inevitable decay. Each King of the Wood was killed by fire so that the divine Tree Spirit within him would be transferred in its entirety to a younger and more robust ancestor.

An analogy can be made between these stories from antiquity and fire management today. Wildland fire, when properly managed, fosters new plant growth and regenerates habitat for wildlife. Fire removes dead trees and litter.

Shrubs invading grasslands are also removed. In each case, fire does not imply death, but rather change. Fire was associated with rebirth and renewal in ancient mythology. Today, fire, when properly managed, is a catalyst for change promoting healthy ecosystems.

However, wildfires, unwanted fires in the natural environment, are devastating. Wildfires are one of nature's oldest phenomena, probably evolving with terrestrial vegetation and the modern atmosphere. Evidence of fire has been found in petrified wood and coal deposits from the Paleozoic era, approximately 350 million years ago. It is likely that it was one of the first elements of nature that humans learned to control. Early societies used fire as a tool to clear land for agricultural activities; as communication device by creating smoke for signaling; as a tool to collect insects and small game for food; and as a weapon against enemies.

Historically, Native Americans used fire as a tool to shape their environment and improve hunting. The bison,

traditionally a western North American species, moved eastward following fires, probably set by Native Americans. The fires burned the brush and trees and led to development of more open grasslands, upon which bison depended for food. Desert tribes removed ground cover with fire to facilitate lizard hunts. Other tribes used smoke to attract deer. The deer, plagued by flies and mosquitoes, entered smoke-filled areas in seek of relief from the insects and became easy targets for hunters. Fire was also used to herd animals onto peninsulas or cliffs from which they could be hunted easily. In California's Yosemite Valley, Native Americans used fire as a tool to shape the landscape for at least 4,000 years. The cumulative effect of the thousands of years of burning was dense grassland on the valley floor.

More recently, since the industrial revolution, humans have harnessed fire for use in engines that power large machines. And, Europeans held a view of fire that was very different from Native American views. At the close of the

Fire Danger - How Will It Affect You?

Fire Danger Reading	Wood fire permitted in stoves and BBQ pits in designated	Use of Compressed Logs	Use of Charcoal	Use of Self-Contained stoves	Cigarette Smoking	Park Closed
LOW	YES	YES	YES	YES	YES	NO
MEDIUM	NO	YES	YES	YES	YES	NO
HIGH	NO	NO	YES	YES	NO ¹	NO
HIGH W/ RED FLAG WARNING	NO	NO	NO ³	YES	NO ¹	NO
VERY HIGH/ EXTREME	NO	NO	NO	NO	NO	YES ²

¹The probation of cigarette smoking under high fire danger includes smoking within a vehicle.

²Park closure applies to all public use vehicles, hikers, bicyclists (mountain and road), and horseback riders.

³The use of charcoal is not permitted during "Red Flag" fire warnings.

- Fires shall at all times be maintained in a safe condition that does not threaten any person, natural or structural feature.
- Never leave a fire unattended.
- Extinguish all fires prior to departure
- Ground fires are not permitted
- Firewood gathering is prohibited.
- The possession or discharge of fireworks is prohibited.
- Report all wildfires immediately.
- Notify park staff of observed violations.
- Ask a park ranger for further information.

Red Flag Program

The National Weather Service Fire Weather Red Flag Program is a simple program designed to inform the public of changes in weather that will dramatically increase the fire danger.

- **WATCH** (Fire Weather Watch formerly Red Flag Watch) is the headline used by NWS Fire Weather Forecaster when severe fire danger/weather is predicted to occur from 12 to 48 (sometimes 72) hours in the future. The presence of thunderstorms that have the potential to produce dry lightning may reduce the lead-time to less than 12 hours, because this phenomenon is hard to predict.
- **WARNING** (Red Flag Warning) is the headline used by NWS Fire Weather Forecaster when severe fire danger/weather is predicted to occur within the next 12 hours in the future. A "Warning" may be issued with less than 12 hours notice if thunderstorms develop dry lightning.

- **CANCELLATION** is the headline used to void an existing "WATCH" or "WARNING" headline.

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Mount Diablo Interpretive Association is a non-profit organization devoted to the promotion of interpretive, scientific and educational projects to help the general public enjoy and become knowledgeable about

Mount Diablo. Their mission is "Preservation through Education". The Association also operates the Mitchell Canyon Interpretive Center. For more information about MDIA, visit their web site at mdia.org or write to MDIA, PO Box 346, Walnut Creek, CA, 94597-0346, call (925) 927-7222 or e-mail to info@mdia.org.

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