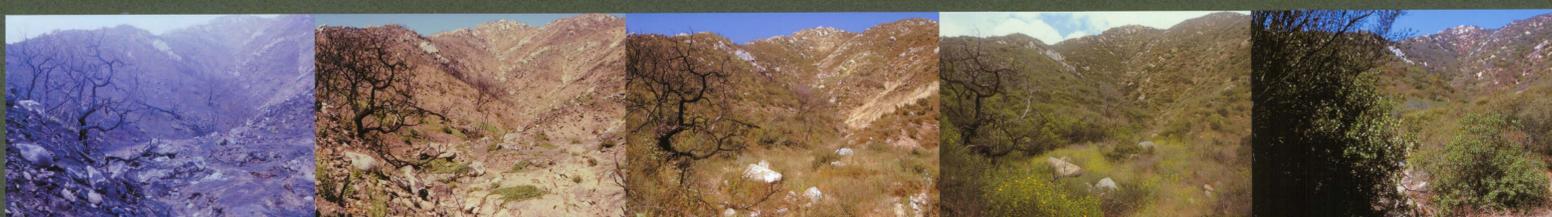


the Forest



Chaparral

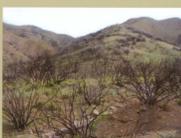
Out of the Ashes

When a fire burns through chaparral, many of the shrubs are consumed by flames, leaving behind bare ashy ground and blackened snags. A closer look at those snags reveals that many are not really dead – they have underground parts that are still alive. These root crowns begin to re-sprout just weeks after a fire. Then the first rains of winter give a boost to the post fire recovery. The re-sprouters send up more new shoots, while other chaparral plants start all over as new seedlings.



Fire Rejuvenates Chaparral

Nutrients like carbon, nitrogen, and phosphorus are locked up in the foliage of chaparral plants. When thickets of dense chaparral burn, nutrients are released back into the soil. This mineral rich ash provides a nourishing environment for both new seed germination and for the resprouting shrubs.



Some seeds will not germinate until heat, smoke, charred wood or ash are present. Fire provides all of these.

Fire also clears out overcrowded growth, allowing sunlight to reach the soil and young plants. Sunlight, nutrients and rain are the elements of an amazing transformation. Once you've seen it, you know it is one of nature's most powerful illustrations of the cycle of death and rebirth. Barren and black hillsides suddenly take on a velvety green lushness punctuated by showy displays of brightly colored wildflowers.

How Chaparral Survives Fire

Chaparral responds to fire with several survival strategies. About half of the plant species have a root crown burl beneath the soil surface. Inside the burl there are many dormant buds, which begin to sprout soon after a fire. Other chaparral plants drop seeds into the soil, where they lay dormant for years or decades, until fire provides a stimulus to germinate. Other plants use both strategies to regenerate after a fire.

Scrub Oak

Fire Strategy:
Re-sprout



Scrub oaks often recover from fire more quickly than other chaparral plants. Within days after a fire, they re-sprout from the root crown at the base of the plant and also along the trunk.



Toyon

Fire Strategy:
Re-sprout



Toyon vigorously re-sprouts after a fire from its underground root crown.



Mountain Mahogany

Fire Strategy:
Re-sprout and fire stimulated seeds



Mountain mahogany uses both fire survival strategies. It recovers from fire by re-sprouting from its underground root crown and by germinating from seed.

Chamise

Fire Strategy:
Re-sprout and fire stimulated seeds



Chamise uses both fire survival strategies. It re-sprouts vigorously after a fire and produces large seedbanks each year. Two different kinds of seeds are produced - some germinate normally and the rest need a fire cue, like smoke or charred wood, to germinate. Chamise is extremely flammable because it has very fine needle-like foliage and volatile oils.

Manzanita

Fire Strategy:
Fire stimulated seeds and re-sprout



Most species of manzanita are killed by fire and depend on seeds to start a new generation. They are fire-dependent, because their seeds require a fire cue - smoke and charred wood - to begin to germinate.

A few species have the ability to both re-sprout from a root crown and produce seeds that sprout only after a fire.

Ceanothus

Fire Strategy:
Fire stimulated seeds and re-sprout



Most of the ceanothus species in California are plants that die when burned. They rely on seed banks left in the soil over many years to sprout and start a new generation of plants. These seeds will only germinate with a fire cue -- heat. But several of the ceanothus species have the ability to both re-sprout from a root crown and produce seeds that sprout only after a fire.

	Re-sprout	Fire Activated Seeds	Both Strategies
Before Fire	<p>Most chaparral species have a root crown burl – a large woody mass at the base of the stem. It lies just beneath the soil surface, where it is protected from fire. This adaptation ensures the survival of many chaparral shrubs.</p>	<p>Some chaparral plants do not have root crowns. Instead they produce seeds that will lay in the soil for years or decades, waiting for a fire. The seeds are dormant yet viable and will not sprout unless there is some kind of fire cue. Water alone cannot penetrate through the thick protective coat into the seed interior to trigger germination.</p>	<p>Some chaparral plants use both strategies – they have a root crown and they also produce abundant seeds each year.</p>
After Fire	<p>The entire plant can be burned, but the root crown and the roots are still alive. Within the root crown, dormant living buds begin to sprout soon after a fire. They don't even need rain to get started – they draw on water reserves in the roots and nutrients stored in the root crown. This allows the plant to immediately re-sprout. New stems can grow 1 – 3 feet tall in the first year after a fire.</p>	<p>When these plants are burned they are destroyed. To regenerate they depend on the seeds they left behind. They are truly fire dependent because their seeds require some fire cue like heat, smoke or charred wood to begin the germination process. Some seeds need the heat of flames to crack or remove a tough outer coat. Then rainwater can penetrate and cause the seed to germinate.</p>	<p>The root crown allows the burned plant to quickly start growing, because chaparral shrubs have deep and extensive root systems. At the same time, the seeds germinate after being activated by fire. They soon establish themselves as a new generation.</p>

People

How the Forest Service Manages Fire



Using Fire

Prescribed burning is a technique that uses fire to reduce old and dead vegetation. It is a practical and natural way to reduce the dangerous accumulation of fuels and minimize the potential for severe wildfires. Areas that are to be treated with prescribed fire are deliberately burned in a careful and controlled manner.

Removing older vegetation also makes room for younger plants that wildlife can use for food. Burning in this way can create "mosaics" or patterns of dense vegetation interspersed with open areas, which improves wildlife habitat.

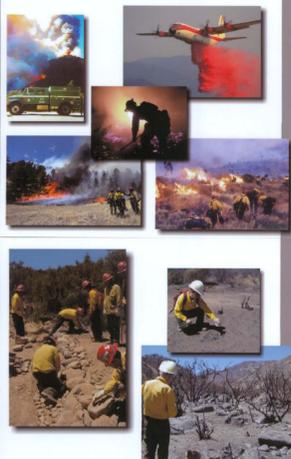
Fire Suppression

All wildfires which occur in the Los Padres National Forest trigger an immediate response with the intention of suppressing the fire. Fire engines, hand crews, bulldozers, helicopters, air tankers and other equipment and personnel are used to contain the spread of a wildfire, and if it threatens non-federal land, there is constant coordination with other firefighting agencies to save lives and property.

After a fire has burned through an area, fire suppression efforts are focused on repairing any damage that occurred as part of the suppression activities. All constructed fire lines are rehabilitated to minimize erosion during winter rains.

Burned Area Emergency Response

After a wildfire a Burned Area Emergency Response (BAER) team is assembled. BAER is a program whose purpose is to protect life, property, water quality and deteriorated ecosystems from further damage from flooding after the fire is out. The objective is not to repair areas damaged by fire, but to reduce further watershed damage from flooding or landslides. The team conducts a rapid assessment of the burned area and recommends emergency treatments. Throughout the winter these emergency treatments are monitored for effectiveness.



How Can I Help?



For more information, please help yourself to the brochures on the table. You may also find these web sites useful:
www.inciweb.org
www.firewise.org
www.fireafecouncil.org
www.cdfislo.org
www.cafirealliance.org
www.sbcfire.com
www.fire.ca.gov

In the Wildland Urban Interface

Wildfires are going to happen. As the population grows, the number of wildfires increases and recent ones are causing more damage than those of 30 years ago. How do we protect life and property while preserving our valuable natural resources?

Neither wildland firefighting agencies nor local fire departments can adequately protect the growing number of structures in urban interface areas. Private landowners must take steps on their own to protect their property. Creating "defensible" space around structures, having evacuation plans ready, using fire-resistant building materials and building with fire in mind can all help.

In the National Forest

Both the wildfire and the post fire landscape can be pictures of overwhelming devastation. Many people want to help – there is a natural desire to fix a disaster. But fire has shaped our landscape, and nature is resilient.

The Forest Service monitors the burned area through the winter for threats to the watershed, infrastructure, lives or property. For the rest of us, we can enjoy watching the forest quietly heal itself as it has many times before. The land eventually renews itself. We can also learn to adapt to fire and flood and the way they affect the natural resources that we use.



- If you use trails for recreation, you can find out about volunteer trail work.
- If you live in the Wildland Urban Interface, take action to maintain clearances and make your house more fire-safe.
- When recreating in the National Forest, use campfires and barbecues only in designated areas. If you use OHV routes, make sure your vehicle has a spark arrestor. Fire prevention is something we all can do.