



Traveling and Hiking Safely in a Burned Landscape



After the Fire

A burned landscape presents a number of safety hazards that either did not exist prior to the fire or are increased by the effects of the fire. In some cases these hazardous conditions may continue for several years after a fire. Be very aware of your surroundings, follow warning signs and directions from park staff and pay particular attention to these potential safety hazards.

Unstable Terrain

Typically the roots of plants hold soil in place. Where plants were burned and will not recover, their roots are also dead and will decompose over the coming months and even

years. As these old roots decompose, they will cease to bind the soil which will allow the soil and rock to shift and move under foot.

Displaced Wildlife

Fire dramatically alters wildlife habitat. Animals that live in the area are often displaced and may appear confused or act oddly shortly after the fire as they try to re-orient themselves to their habitat. For animals living in groups, the effects may also include the loss of members and these animals may alter their social behavior. Many animals are migratory and may have been out

of the area at the time of the fire. These animals may experience a delayed response to the change of habitat when they return or they may simply choose not to return to that particular area. Many plants respond favorably to fire, often increasing the number and variety of plants, encouraging animals to live in new places.

Hazard Trees

Trees that could cause harm to people or buildings are considered hazard trees. The most immediate hazard trees have been cut down, but it is often hard to know which trees that are partially damaged will survive. Experts continue to assess fire areas over several years, looking for hazard trees which are then removed. When hiking in a burned area, be on the lookout for trees that

appear dead. Trees may fall and impact an area up to 2 times the height of the tree. It is often hard to guess the height of a tree when viewed from the ground so give yourself some extra room when choosing a travel route and especially where you choose to rest. Be careful of hazard trees after rain or during high winds.

Burned Stump Holes and Root Chambers

Burned stumps may create rather obvious large holes, but these holes may actually be bigger than you think! In many cases, the fire may have burned the woody root material leaving vacant chambers or tunnels where solid wood used to be. Over time, these root chambers will collapse. Your

body or vehicle weight on the root chambers may cause them to collapse and open up holes under your feet. Be especially careful after rain as the moisture may travel through the root chambers and make collapse easier.

Flash Flooding and Debris Flows

Burned landscapes have fewer plants to catch rain so more water reaches the ground, often with high impact. In addition there are fewer plants actively growing so like a sponge, the soils absorb water much more quickly than before a fire. Rain that falls after a fire often increases the intensity of flash floods and creates a risk of rocks, mud, and other debris flowing across an area. Be very aware of the weather, particularly late afternoon

thunderstorms. Avoid travel in creek beds when rain is likely. If you are caught in a creek bed during a monsoon storm, climb to high ground. Don't enter flood waters- the strength of the flow may be stronger than you estimate. Be aware the rain may occur away from you and still create a flash flood that travels for miles down slope. Approaching flood waters make a rumbling sound. Look, listen, and react quickly!

Monument Fire

Frequently Asked Questions & Facts

When and where did the Monument Fire start?	The Monument Fire was first reported on June 12, 2011 at approximately 1:15 pm The area of the start has been identified in Coronado National Memorial along the US/Mexico border, but the specific point of origin remains unknown.	It is human caused and is still under federal investigation. The fire cost over \$20 million but could significantly cost more as restoration projects continue.
How many acres did it burn?	The fire was considered 98% contained as of Saturday, July 9, 2011. It burned 30,526 acres.	
How many people worked on the fire?	The highest number of personnel (1,311) working on the fire occurred during the week of June 19.	
What special equipment was used?	Equipment used included 109 engines, four air tankers, three dozers, eight helicopters.	
How many structures were lost?	A total of 84 structures were burned- 62 homes, four commercial, and 18 outbuildings, but no one killed or injured.	
What was done to protect the structures within the memorial?	Fire crews cleared brush and fallen leaves from around the buildings and removed lower limbs of trees. Burn-out operations were also utilized around the structures.	
Why did we burn what we burned?	The three priorities of fire managers are protection of lives, structures, and resources. When a wildfire moves during the day, it often burns hot. With high intensity burning, the trees are often burned so much they don't survive. In order to decrease the potential of intense fire in the memorial and to protect the visitor center,	burn-out operations were undertaken. These fires were set during times when the humidity was higher and the winds and temperatures lower. They also reduced the intensity of the main fire when it passed through the memorial. The burn-out fires burned grasses, but many of the larger shrubs and trees survived in those areas.
How will the fire impact the creeks, springs, or water flows in general?	The loss of vegetation as a result of the fire increases the possibility of flooding and mudslides. Drainages have been cleared of downed trees and other debris; culverts have been	cleaned. This is an on-going project and will be repeated after every significant rain event.
How will fire change the landscape?	Change is in regards to diversity of species, diversity of age of stands, and a mix of the above. Some plants and animals do better with a closed canopy while others thrive in a forest that is open with more grass. Although the landscape has changed, the result will likely be that some	species will thrive while others might diminish. Regardless, the plants in Coronado National Memorial and the surrounding sky island mountain range will continue to grow.
When will it look like it used to?	Change is often difficult to experience and the changes that occurred in the memorial were relatively abrupt. Many of the trees that were burned were hundreds of years old. It will	take time for the landscape to transform from blackened to green. Although individual plants may have died, the variety and beauty of the landscape continues.
What happened to the wildlife?	During a fire, wildlife will leave the area, burrow under the ground, or find some other safe place to hide and be protected. We do not know how many or specifically what animals died. There are islands of unburned habitat throughout the memorial which serve as important areas for animals that survived the fire and seed sources for native plants to re-colonize the burned area. In addition, much of the wildlife habitat in the memorial is composed of plants that respond favorably to fire. Some animal populations may increase	while others may decrease over the next several years. You will likely see many of the same types of animals that you might have seen before the fire. Black bear, deer, coatimundi, birds, rabbits, and reptiles have been seen by staff members.