

Bandelier

Bandelier National Monument

National Park Service
U.S. Department of the Interior



The Las Conchas Fire and Bandelier



The Las Conchas was the largest wildfire in New Mexico history, burning a total of 154,349 acres. The fire burned 43,000 acres in its first burn period spreading at a rate of an acre per second. This fast moving fire posed a threat to monument visitors, residents, and artifacts, all of which had to be evacuated. The fire started about 5.5 miles west of Bandelier when a large aspen tree fell on a power line. Local fire crews worked through the night

attempting to slow the blaze. Their quick response and hard work saved countless acres that would have otherwise burned. Under a looming cloud of smoke that darkened the sky above Frijoles Canyon, the Los Alamos Fire Department sprayed the Visitor Center and Historic District buildings with fire retardant foam, while priceless museum artifacts were carefully evacuated and loaded into a vehicle that could take them out of the canyon. The Las Conchas

Fire burned though the previous burn footprints of the La Mesa, Dome, and Cerro Grande Fires. It consumed homes of those living in the forest, threatened the town of Los Alamos, and Los Alamos National Laboratory. Flames on that first night could be seen from Santa Fe as they burned up the flanks of Scooter Peak and Rabbit Ridge well after midnight.

Las Conchas and Bandelier's Resources

Major archeological sites including Stone Lions, Yapashi, and Painted Cave were located within the burn footprint. Exposed portions of archeological sites can suffer fire damage, however, the majority of the archeological sites located in the backcountry are unexcavated, which protects sites from fire damage. Many areas are seeing increased vegetative recovery near

archeological sites in the park. Bandelier is hopeful the post-fire erosion will be limited, further ensuring the good condition of archeological resources. Bandelier's own Fire Use Module and Engine 91 prevented fire from reaching any of the main archeological sites and historic structures at park headquarters. Along with archeological sites, miles of trails in Bandelier backcountry

were impacted by the fire. Many trails have been made impassable or too hazardous due to tree fall or post-fire erosion. Bandelier also lost its ranger cabin in Capulin Canyon, a popular resting place for backpackers and staging area for park staff during extended backcountry operations.

Area Affected by the Las Conchas Fire

Bandelier	62%	20,798 acres
Bandelier Wilderness	60%	13,929 acres
Archeological Sites	53%	1,515 sites
Trails	63%	53.5 miles

Las Conchas and Frijoles Canyon

More than twelve miles of Frijoles Canyon were burned upstream of the Visitor Center and Historic District. Unvegetated and exposed soils will continue to make Frijoles Canyon susceptible to flooding and increased runoff in the coming years. Fire can

cause a waxy layer to form at the soil surface. This hydrophobic layer reduces the ability of rain water to soak into the ground creating perfect conditions for flash flooding. Large and heavy rain events cause a different problem during which silt laden

runoff is swept into tributaries, streams and finally the Rio Grande. The added silt reduces the oxygen content of the water, harming fish populations and, lowering overall water quality.

Las Conchas and its Effects on the Future

The road to recovery will be long yet progressive. Typically in areas where fire has consumed most or all vegetation, grasses and shrubs are the first to reappear. This is followed by trees if conditions are favorable. But starting with a blank slate leaves room for uncertainty about the vegetative species, and thus the animal communities, that will establish the area. Climate change compounds these uncertainties. Plants better suited for a changing climate may out-compete plants that were long present in an area, thus promoting an ecosystem type change. Scientists at the park are trying to understand true effects of climate change on

ecosystem succession patterns. Wildfires with the magnitude of those that occurred in Arizona and New Mexico during 2011 are becoming more frequent due to patterns of increased temperatures and drought coupled with patterns in forest management, such as years of active fire suppression resulting in overgrown forests with more to burn. Recognizing that the majority of the forests in the Southwest are vulnerable to large wildfires, it is important to look at alternatives in forest management strategies such as focusing on maintaining a healthy forest understory. By focusing efforts on intensive thinning of the medium and

small trees that can carry fire from the forest floor into the canopy and increasing the number of acres burned during prescribed and wildland benefit fires, we can avoid more fires like Las Conchas and those in Arizona.