



Death Valley Floods 2015



Large sections of Scotty's Castle Road and historic fence were destroyed.

October 18 Storm

On the night of Sunday, October 18, 2015, park dispatch received word that visitors were stranded by flooding near Ubehebe Crater. Park rangers evacuated Mesquite Springs Campground and sheltered in place with 20 visitors in the northern end of the park. That night a park ranger watched power poles and metal dumpsters float out of Grapevine Canyon—an initial indicator of the flood's impacts.

Series of Record-Breaking October Storms

Over a two-week period in October, a series of unusual storms hit Death Valley National Park in a patchwork of intensities that varied by location.

These storms dropped a total of 1.3 inches of precipitation at Furnace Creek, the headquarters in the center of the park. This set a record for the wettest October, in a location that averages about 2 inches of rain annually. Furnace Creek was spared the strongest parts of the storms, which affected the southern and northern parts of the park more severely.

Scotty's Castle area averages 4 inches of rain per year, yet it received over 3 inches of rain and hail in just a 5-hour period, after the ground was already saturated from preceding days of rain.

Floods Shape Death Valley

Rainfalls that seem moderate by the standards of less arid regions can have major effects in a desert environment. Partially due to sparse vegetation, desert soils tend to be hard-packed and don't soak up water quickly. Steep slopes in Death Valley also tend to shed rain rather than absorb it. This water ends up channeled in low spots such as canyons and can very suddenly cause flash floods.

Flash floods can cause very expensive damage to roads and infrastructure. They can also be dangerous. Never drive across active flooding and avoid hiking in canyons when there is a risk of rain.

Yet these same flash floods are a major force behind the stark beauty of Death Valley. Flash floods moved debris to create the alluvial fans that spill out of canyon mouths. Flood erosion created the Natural Bridge and carved the graceful curves of Mosaic Canyon.



24 power poles that supplied electricity to Scotty's Castle were washed away.

Road Damage

- Artists Drive: Reopened after repairs.
- Badwater Road (CA-190 to Badwater): Debris has been removed and road opened.
- Badwater Road (Badwater to Shoshone): About a half-mile of pavement and road base washed away in a ten-mile segment of the southern end of the road. The section between Badwater and Shoshone remains closed.
- Harry Wade Road: Closed pending repairs.
- Scotty's Castle Road (North Highway): Debris has been removed and road opened.
- Scotty's Castle Road (Bonnie Claire Road): Closed due to sections of extreme washouts.
- Twenty Mule Team Canyon Road: Closed pending repairs.
- West Side Road: Closed pending repairs.

Flooding at Scotty's Castle

The October flood in Grapevine Canyon was much larger than any flood event since the construction of Scotty's Castle in the 1920s. The maximum flow was estimated at 2,000 cubic feet per second and deposited debris over 10 feet high.

Flood water surrounded multiple buildings in the Death Valley Scotty Historic District. The most severely damaged historic building was the Garage/Longshed, which functions as the Scotty's Castle Visitor Center. The flood forced open doors, broke windows, broke interior walls, and smashed one exterior wall. Flood waters 4 feet deep left several feet of mud and rocks inside the building.

- Hacienda building: interior wall damage due to 1-4 feet of mud deposited inside.
- Visitor Center (Garage/Longshed): interior wall damage, exterior wall damage, broken doors, broken windows.
- Scotty's Castle (Main House & Annex): The roof leaked in several places, allowing moisture into the building.
- Museum collection: 65,000 archives, furnishings, and other artifacts are threatened by lack of heating, air conditioning, humidity control and fire suppression.



South wall of the Visitor Center was punched out by the force of the flood inside the building. Another section of exterior wall was pushed 18 inches off the foundation.

- Water system: The spring house, one of two reservoirs, and the pipeline were destroyed.
- Electricity: Over 20 power poles were washed away.
- Sewer: The leach field was damaged.
- Historic Pool: Was filled with mud and water.
- Historic Bridge: Footings were undercut and the bridge moved slightly but is structurally sound.
- Historic Fence: Over a mile of historic concrete fence posts were washed out.
- Grounds: Mud and rocks up to four feet deep surrounded several buildings and covered the parking lot and picnic area.

More Information

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