

Death Valley National Park

National Park Service
U.S. Department of the Interior



Death Valley Floods 2015

On the evening of Sunday, October 18, 2015, a torrential storm dropped nearly 3 inches of rain in just five hours on the northeast section of Death Valley National Park. That night, rangers evacuated Mesquite Springs Campground and sheltered overnight with twenty visitors in their vehicles at Ubehebe Crater. Flood waters continued to rage the next day, destroying the road through Grapevine Canyon to Scotty's Castle. With road access gone, park staff hiked three miles to Scotty's Castle to find the Castle structure intact, but the grounds and many other buildings buried in a thick coating of mud and rocks.

This flood came on the heels of several other October flash floods, with cumulative damage effecting both the Scotty's Castle and Badwater areas. Because damage is both severe and wide-spread, staff anticipates that some parts of the park will be closed for many months.

Incident Management

- A road crew from Joshua Tree National Park has been helping to clear debris.
- Rangers from many parks in the region have provided support for emergency services and will continue to rotate through.
- The Pacific West Incident Management Team will begin managing the incident beginning October 28. This will provide park staff, who have been working long days, an opportunity to rest and re-focus on damage assessment, cleanup, restoration, and preparing for the busy winter visitor season.



Weather and Flooding

- This October, staff has measured 1.3 inches of precipitation at Furnace Creek, making this the wettest October on record.
- Over 2.7 inches of rain was measured at Scotty's Castle after the October 18 storm, more than the average annual rainfall for this area, 2.36 inches.
- The resulting flood through Grapevine Canyon flowed at a rate of about 93,000 cubic feet per second—10 times that of a "100 year" flood.



Road Damage

Most park roads have had to be graded and brushed to remove mud and debris. The following roads will require additional work.

- Bonnie Clair Road: All ten miles of this access road to Scotty's Castle, has been destroyed. A temporary one-lane dirt road has been graded to provide access for work crews to Scotty's Castle.
- Badwater Road: Debris on the road north of Badwater should be cleared within two weeks. South of Badwater, the road is washed out in several places, with miles of pavement missing.
- Artist Drive: Closed due to mud flows and road damage.
- Twenty Mule Team Canyon Road: This dirt road was washed out.
- Salt Creek Road: This dirt road was washed out.



Scotty's Castle Infrastructure Damage

Fortunately, the main building and its contents sustained only minor damage due to roof leaks, and the HVAC system is down due to compromised utilities. However, nearly every other building within the Death Valley Scotty's Historic District, has been impacted.

- Water system: the spring box and mile-long water line were destroyed.
- Electricity: twenty-four power lines were destroyed.
- Propane: the line is broken and gas has been shut off.
- Visitor Center and Hacienda Office buildings: several feet of water flowed through these buildings, leaving behind deep mud. Carpets, drywall, exhibits and utilities will need to be replaced. Computers, a photocopy machine, files and paper records have been destroyed. Bookstore shelving and sales items such as books and t-shirts have been lost. Walls will require inspection to ensure structural integrity.
- Other buildings sustained minor flooding. The longshed flooded and may have sustained serious structural damage; this will be evaluated by a structural engineer.
- Picnic area: The stream course was substantially altered. The lawn, sprinkler system, and picnic tables were destroyed.
- Grounds: Several feet of mud, boulders and debris are packed up against buildings. The watercourse feature is damaged. Some courtyard areas are buried in mud; others were gouged by water flows exposing pipelines.
- Several miles of historic fence-line washed out.

Medium and Long Term Impacts

- Ranger tours through Scotty's Castle generate \$550,000 in fees annually, and 120,000 people per year visit the site. There will be no visits and no tours through the 2016 season.
- Damage estimates are ongoing, but will be in the tens of millions of dollars.
- An El Niño weather pattern is predicted for this winter, bringing the possibility of increased precipitation and additional flooding.
- If winter rains continue, the park can expect a spectacular spring wildflower event, drawing in high visitation during 2016, the Centennial Year of the National Park Service.



More Information

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Death Valley Flood 2015

— DESTROYED ROADS

Scotty's Castle
extensive damage

Beatty

Lone Pine

Furnace Creek

Ridgecrest

