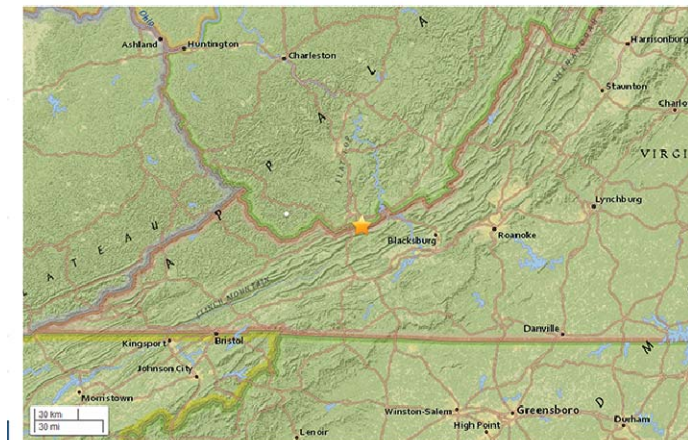


2.4 Magnitude Earthquake, Princeton, WV* - 10/8/2017



M 2.4 - 11km SE of Princeton, West Virginia

2017-10-09 02:15:03 UTC 37.29°N 81.016°W 8.2 km depth



Administrative Region

ISO
USA
Country
United States
Region
Virginia

Nearby Places

Direction data (below) indicate the position of the event relative to the place.

Hardy, West Virginia	2.5 km (1.5 mi) SSE	Population: 0
Bluefield, West Virginia	18.4 km (11.5 mi) E	Population: 10,447
Radford, Virginia	42.8 km (26.6 mi) WNW	Population: 16,408
Blacksburg, Virginia	53.8 km (33.4 mi) W	Population: 42,620
Charleston, West Virginia	129.6 km (80.5 mi) SSE	Population: 51,400

[View Interactive Map](#)

Earthquakes in the Giles County Seismic Zone

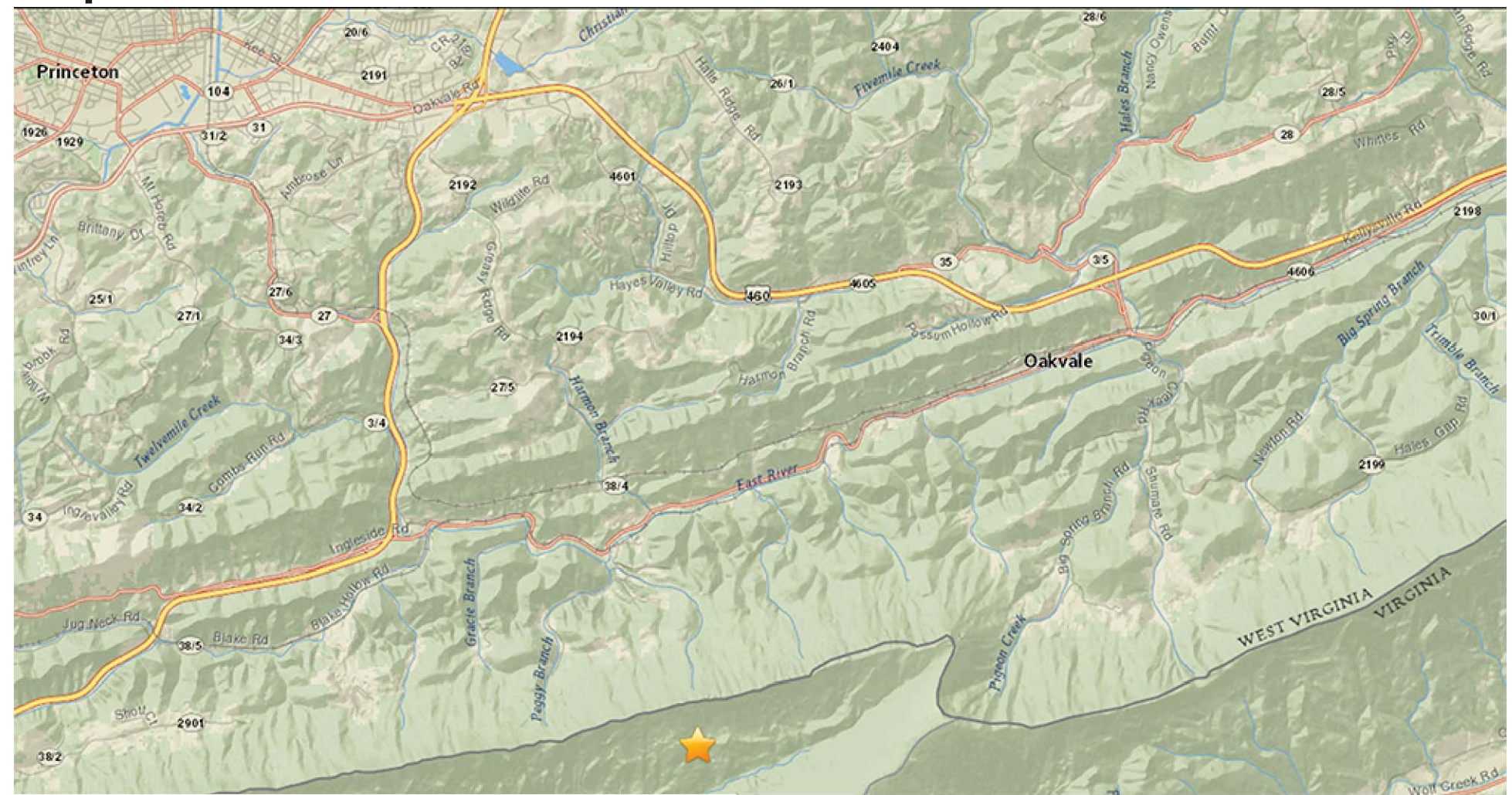
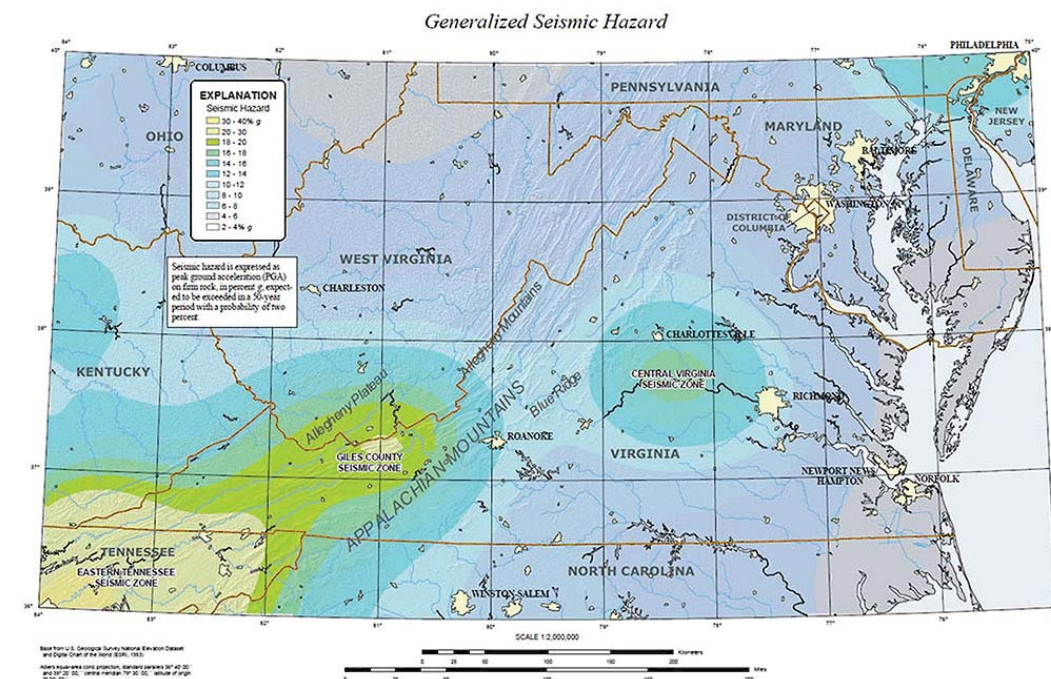
Since at least 1828, people in the Giles County seismic zone of southwestern Virginia and adjacent West Virginia have felt small earthquakes and suffered damage from infrequent larger ones. The **largest damaging earthquake** (magnitude 5.9) in the seismic zone occurred in 1897. Smaller, slightly damaging earthquakes occur at variable intervals, but in the zone they tend to occur a few decades apart. Still smaller earthquakes that cause no damage are felt once or twice a decade in the seismic zone.

U.S., are typically felt over a much broader region. East of the Rockies, an earthquake can be felt over an area as much as ten times larger than a similar magnitude earthquake on the west coast. A magnitude 4.0 eastern U.S. earthquake typically can be felt at many places as far as 100 km (60 mi) from where it occurred, and it infrequently causes damage near its source. A magnitude 5.5 eastern U.S. earthquake usually can be felt as far as 500 km (300 mi) from where it occurred, and sometimes causes damage as far away as 40 km (25 mi).

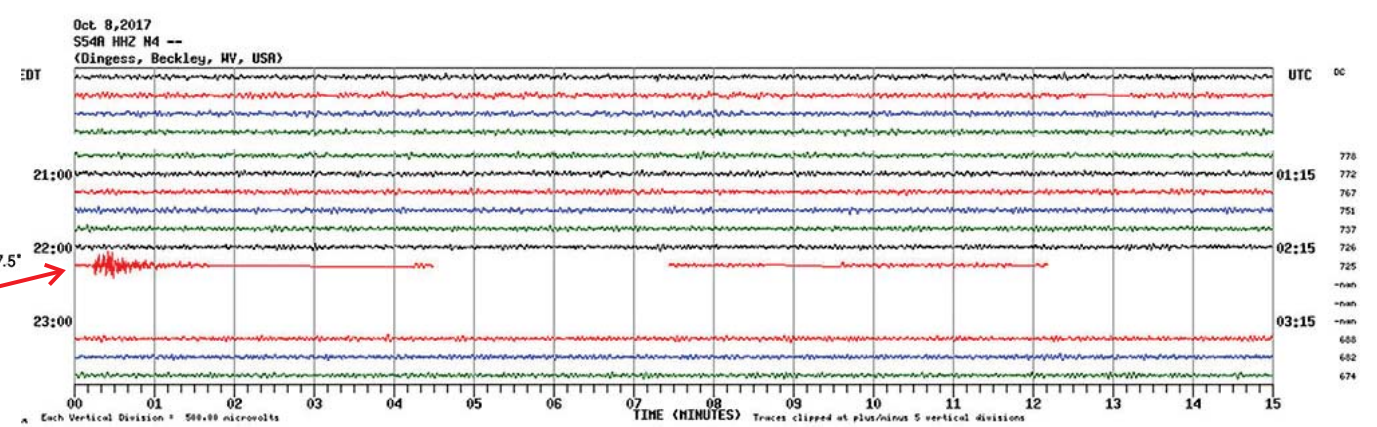
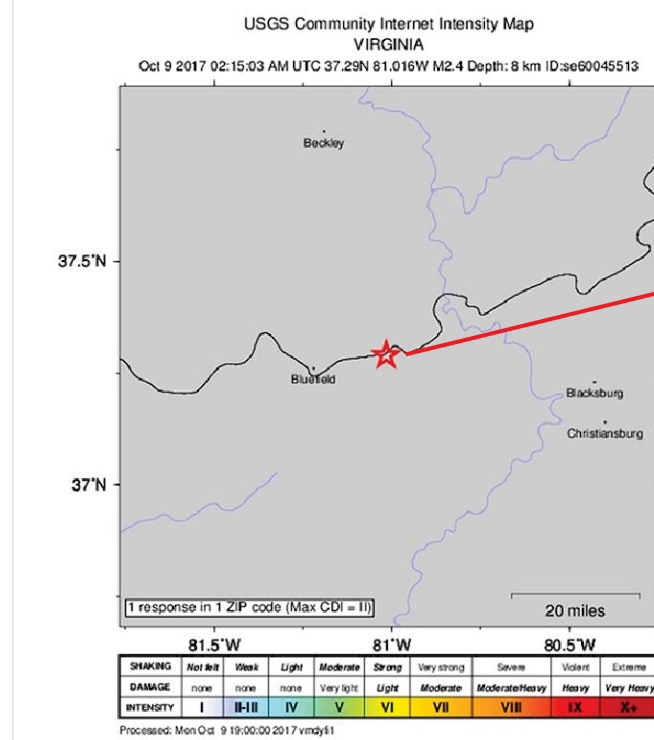
Faults

Earthquakes everywhere occur on faults within bedrock, usually miles deep. Most bedrock beneath southwestern Virginia and adjacent West Virginia was assembled as continents collided to form a supercontinent about 500-300 million years ago, raising the Appalachian Mountains.

At well-studied plate boundaries like the San Andreas fault system in California, often scientists can determine the name of the specific fault that is responsible for an earthquake. In contrast, east of the Rocky Mountains this is rarely the case. The Giles County seismic zone is far from the nearest plate boundaries, which are in the center of but numerous smaller or deeply buried faults remain undetected. Even the known faults are poorly located at earthquake depths. Accordingly, few, if any, earthquakes in the seismic zone can be linked to named faults. It is difficult to determine if a known fault is still active and could slip and cause an earthquake. As in most other areas east of the Rockies, the best guide to earthquake hazards in the seismic zone is the earthquakes themselves.



Intensity Map ZIP Map Intensity Vs. Distance Responses Vs. Time DYFI Responses



*Not actually in West Virginia.

Seismic activity is associated with the Giles County Seismic Zone - a complex area of folding and many thrust faults that are still responding to old stresses.