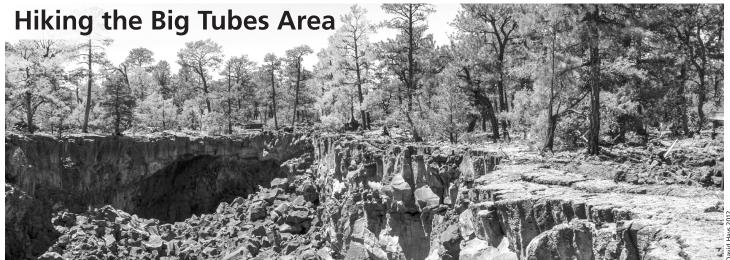
National Park Service U.S. Department of the Interior

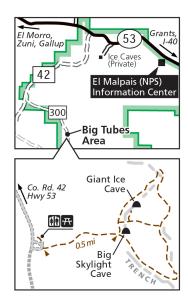
**El Malpais National Monument** 





The Big Tubes Area offers first hand exploration of a rugged volcanic landscape. A lava wall, lava bridges, collapses, and lava tube caves can be seen in this harsh land of beauty and mystery.

# Exploring the Big Tubes Area



To get to the Big Tubes Area, take County Road 42 to the Big Tubes Road (NPS Road #300) and travel 4.5 miles to the parking area. Although normally accessible in a passenger car, these roads can be impassable during wet weather, even in four-wheeldrive vehicles. Please check road conditions before venturing to this area.

From the parking area, a cairn-marked route leads you over a portion of the Bandera Lava Flow. These rock cairns can be difficult to see. Be sure to keep the cairn route in sight at all times. Allow yourself plenty of daylight to enjoy your exploration. The surface trail is approximately 2 miles. If you hike the whole trail, plan on spending at least 4 hours.

From the trail, the parking area is to the west towards the low rise of Cerro Rendija.

# Safety

- Tell someone when you will return.
- Know your limits: At 7500' (2300 m) the
- area can be very hot & dry or cold & wet.
- Footing can be difficult and lava is sharp.

### Equipment

- Plenty of water and a snack
- · Sturdy hiking shoes; no sandals!
- Hat, sunglasses, and sunscreen
- Rugged GPS handheld device
- First aid kit

### **GPS Coordinates**

Know how to use your GPS unit before you begin this hike, as the trail can be difficult to follow and your GPS may save your life.

Parking Area	Sign Junction (see map)
Latitude 34° 56' 40.5'	N Latitude 34° 56' 42.6"N
Longitude 108° 6' 24.8"	W Longitude 108° 6' 5.6"W

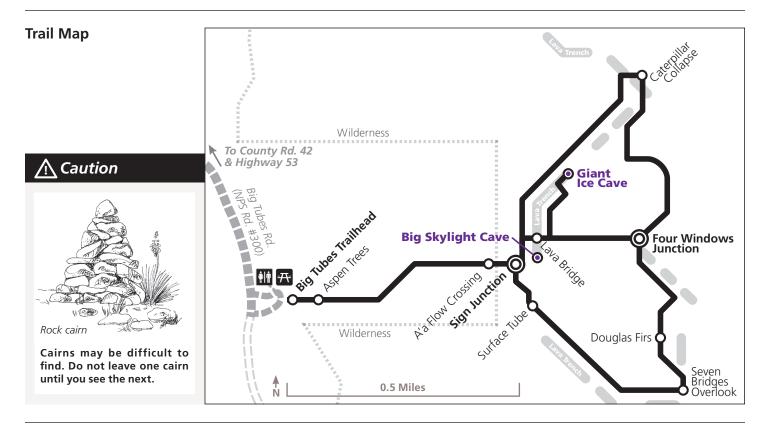
### **Cave Permits**



Several caves in the Big Tubes Area can be explored if you have a caving permit, available for free at the El Malpais Information Center, approximately 23 miles southwest of Grants on NM Highway 53; or at the Northwest New Mexico Visitor Center, 1900 E Santa Fe Ave in Grants.

Caves may be closed seasonally or yearround if they are hazardous, contain delicate rock formations, or house colonies of bats.

Before you go caving, you must first talk with a ranger for the latest caving information and a free caving permit.



## Bandera Crater & Lava Flow

Approximately 10,000 years ago, magma broke through the Earth's crust just a few miles north of the Big Tubes Area. Under great pressure, the liquid rock burst into the air to form a lava fountain sometimes hundreds of feet high. Some of the lava cooled and separated in the air, falling to the ground as cinders which accumulated and built Bandera Crater.

Hot, fluid lava flowed from the base of this loosely structured cinder cone in a series of flows that lasted for several years. Confined by channels of older lava, these "lava rivers" flowed to the south and east, skirting the southern edge of the Zuni Mountains before spreading out over the large basin south of Grants, New Mexico.

As the outer layer of the lava flows cooled and hardened, it insulated the fluid lava flowing within. Eventually, the lava ceased flowing, with the hot fluid lava emptying downhill and leaving behind vast lava tube caves. The result of this process is a seventeen-mile-long lava tube system, one of the longest in the Continental United States. The lava tube caves and collapses in the Big Tubes Area are part of this system.

### Wilderness



More Information

Most of El Malpais National Monument has been proposed for wilderness designation. Lack of developement in this primitive environment provides a remote, quiet, and awe-inspiring wilderness experience. You can help maintain this area by understanding wilderness "Leave No Trace" ethics.

#### Leave No Trace

- Pack out everything you pack in.Leave all natural, cultural and historical
- objects as you find them.Tread lightly and leave no trace of your visit; pick up any trash you find.
- Respect wildlife and never feed animals.

505 783-4774 or 505-876-2783 www.nps.gov/elma

### EXPERIENCE YOUR AMERICA™

Grants, New Mexico, 87020

1900 E Santa Fe Ave

Northwest New Mexico Visitor Center