

Welcome to Earth Matters...field notes on the geology of New Mexico's Enchanting Landscapes.

October 12 to 18 is Earth Science Week ... so join me ... in uncovering the mysteries of our planet and its dynamic history.

New Mexico's Red Hot Landscapes

Could New Mexico rival Hawaii as a volcanic tourist destination? Could there be something hotter than New Mexico chile? What are the chances of a volcanic eruption in New Mexico in the next 10, 100, or 1000 years? Pretty slim, but not impossible. This area will likely experience at least 100 eruptions in the next million years.

Volcanoes are everywhere in New Mexico. The black, barren, lunar-landscape rocks around Grants and Carrizozo and the black flat-topped mesas around Albuquerque are lava flows. Mount Taylor, and Capulin Mountain are volcanos; Los Alamos is built on the flank of a huge supervolcano. Shiprock is the remnant of a volcano, as is Cabezon Peak.

The Jemez Mountains, in northern New Mexico, produced an enormous explosive eruption a little over a million years ago. It was at least 250 times bigger than the 1980 eruption of Mount St. Helens. The rocks in the tall buff-colored cliffs around Los Alamos are deposits from this eruption.

In contrast, most of the recent volcanic activity in New Mexico has been passive eruptions, like those taking place in Hawaii today. These include a 3000 year old lava flow near Grants, and the 5000 year old "Valley of Fire" lava flow near Carrizozo. Volcanic activity in New Mexico in the next 100 or 1000 years would most likely be of this type, and would form another interesting and beautiful feature in the enchanting New Mexico landscape.

Celebrating Earth Science Week, this is Nelia Dunbar of the Bureau of Geology, at New Mexico Tech.