

## **Welcome to Earth Matters – field notes on the geology of New Mexico’s Enchanting Landscapes. Celebrating Earth Science Week, I’m Kitty Pokorny.**

When you turned on the faucet today, did water come out? Have you ever thought about where that water came from? In New Mexico, most of our drinking water comes from underground. Take a moment and imagine what the groundwater beneath the Land of Enchantment looks like.

If you’re like most people, you might imagine that there is a vast underground lake... deep, blue and cool. Or maybe it’s a river flowing underground? Or is it a few drops of water stuck in a rock?

Those of us who work on mapping the groundwater and geology in New Mexico must create visuals of groundwater using maps. It’s not as easy as you might think! To begin with, the geology of New Mexico is anything but simple. The rocks here range from 1.7 billion-year-old granites to recently formed mudstones from this summer's floods, with a little bit of everything else in between. Within these rocks, there are fractures and faults that have broken up the state into a 3-dimensional jigsaw puzzle. Now imagine how water might flow through all of this!

As it turns out, groundwater is NOT found in large underground lakes or rivers, except in *very rare* cases, such as in southeastern New Mexico where caves have water flowing in them. In many of New Mexico’s most-populated regions, groundwater resides within the tiny empty spaces between grains of sand, clay and gravel. In other regions, groundwater occurs in cracks and fractures in hard bedrock layers. Then this underground water must be pumped to the surface with wells.

So the next time you pour a drink of water, think about the complicated path that water has taken to get to your faucet, and fill your glass!

**Celebrating Earth Science Week, I’m Kitty Pokorny, with the New Mexico Bureau of Geology at New Mexico Tech.**