



A three dimensional perspective of the hydrogeology of Benton County drawn by Todd Jarvis, OSU Institute for Water and Watersheds. Surprisingly, there are few geologic cross sections drawn across Benton County that connect the local geology to “place” or the geography of the county. While the idyllic landscape in Benton County leaves the typical resident and landowner with the feeling that the area is “water rich”, the reality is that locating sufficient quantities of potable water for individual domestic wells is challenging due to the complex geology in the area. The high elevation of Marys Peak to the west is due to large scale faulting which is not well understood. Residents and new homes located in the western part of Benton County typically develop water from the volcanic rocks which reportedly yield good quality water. Residents located in the eastern part of Benton County typically rely on shallow wells that draw water from the sand and gravels associated with alluvium deposited along the Willamette River. The siltstones and fine-grained sandstones underlying the alluvium typically yield low quantities of poor quality water. The complex hydrogeology in Benton County is probably one of the reasons why most of the larger communities use surface water supplies instead of relying on groundwater supplies.