Unit 4: Pennsylvania's Regions

Okay. First you learned where groundwater is. Then you learned how it moves through different rock layers. And now you know about pollutants. Time to put them all together. Time to find out what happens in YOUR area of Pennsylvania.

It would be easier if Pennsylvania's rock layers were the same all across the state. They aren't. The state has seven main physiographic regions (sometimes called provinces). The map below gives a general indication of the extent of each region. Geologic maps of Pennsylvania are available from the Department of Conservation and Natural Resources, Bureau of Topographic and Geologic Survey.

Remember the major kinds of deposits in which aquifers are found in -- the unconsolidated (like gravel), the sedimentary (like sandstone, shale and limestone), and the crystalline (like gneiss)? Each of Pennsylvania's regions has a distinctive set of rocks, falling in one of those three categories.

The Atlantic Coastal Plain and Central Lowland Provinces are mostly unconsolidated deposits; the Piedmont, Blue Ridge and New England Provinces are mostly crystalline and sedimentary; and the Ridge and Valley and Appalachian Plateau Provinces are sedimentary. The differences between the provinces are mainly because of how different rock types and geological settings have been affected by erosion processes.

ATLANTIC COASTAL PLAIN

The Coastal Plain is a narrow strip of land in southeastern Pennsylvania. The entire area is about 45 miles long and up to five miles wide, and runs parallel to the Delaware River. Most of the Coastal Plain deposits are sand, gravel, silt and clay, which drape over crystalline igneous and metamorphic rocks (known as the basement).

