Landslides

Intense rainfall, rapid snowmelt and steep hillsides are prime conditions for a ***landslide.*** Landslides range from watery mud to thick mud carrying rock, boulders and trees, to toppling rocks off steep slopes. Moving as fast as 60 kilometers/hour, landslides can potentially cause millions of dollars of damage to buildings and roads as well as human fatalities. In the Northeast, landslides are common in the Appalachian Mountains, New England, and the ***Appalachian Plateau*** due to steep slopes, a fairly rugged landscape and clay-rich soils. Though the Appalachian Plateau is called a ***plateau***, it is deeply dissected by river valleys that have formed steep slopes along which landslides are common.

Clay and clay-rich soils that become saturated with water have drastically reduced friction, allowing other rock layers or sediment to slide rapidly upon it. In the glaciated areas of the Appalachian Plateau, including northern Pennsylvania and most of New York, clays were deposited at the bottom of glacial lakes occupying glacially carved valleys. Though many of the lakes no longer exist, the clay deposits still remain and are a source of landslides in the region.

Other causes of landslides, especially in the Appalachian Plateau region, are the result of the activities of humans. Underground mining, common in the bituminous ***coal*** fields of western Pennsylvania and Maryland, reduces the stability of overlying rock and often results in landslides. When older mines are filled, the settling rocks and sediments can cause landslides. Poorly engineered fills on slopes can also trigger landslides.

Recognition of landslide-prone areas is important for land use planning and zoning decisions. Damage from landslides can be prevented by not building in areas that commonly experience landslides or show evidence of past landslides.

Radon

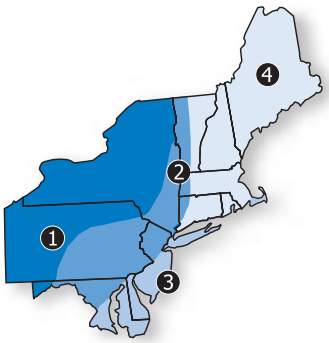
Radon is a chemical element: an odorless, colorless, radioactive gas that commonly forms from the breakdown of the element uranium. Radon first came to wide public attention as an environmental issue in the mid 1980's when high concentrations of the gas were found in houses overlying the Precambrian rocks of the Reading ***Prong*** in southeastern Pennsylvania. Though scientists continue to debate the health risks of radon, it is clear that smokers exposed to high levels of radon gas have an increased risk of lung cancer.

The term landslide *includes rock falls, avalanches, debris flows, mudflows and the slumping of rock layers or sediment.*

The topographic term, Appalachian Plateau, *includes part of New York, Pennsylvania and Maryland, and corresponds with the Inland Basin region.*

see Topography, p.109, for more on the **Appalachian Plateau.**

see Glaciers, p.70, for more about glacial deposits.

see Non-Mineral Resources, p. 154, for more on **coal.**

see Rocks, p.40, for more about Precambrian **prongs.**