Appendix 1.7 Description of physiographic regions of Kentucky.

Cumberland Plateau and Mountains
The Cumberland Plateau and Mountains, also commonly known as the Eastern Coalfields, encompass all or part of 35 counties and cover 10,500 square miles. It is the southern portion of the Appalachian Plateau that extends from New York to Alabama. This is a highly dissected area, with steep valley walls and narrow, sinuous valleys. The shale and sandstone of steep slopes date back 300 million years. Cliffs of resistant sandstone often cap the ridges. Wooded mountain slopes extend to the horizon in all directions. Most of the rich, mixed forest have been logged and are now in various stages of second and third growth. Subsurface and surface coal mining has been practiced for many years. The highest elevation is 4,139 feet at Big Black Mountain, which is also the highest elevation in Kentucky. Major rivers are the Big Sandy, Licking, Kentucky, and Cumberland.

The Knobs
The Knobs Region, 2,300 square miles in area, forms a horseshoe-shaped boundary to the Bluegrass Region. Knobs, from which the region gets its name, are dome-shaped hills with erosion resistant caprocks overlying 400 million year old shale and siltstone that were easily eroded. An indicator rock of the knobs is the black shale or oil shale. The knobs are interspersed among valleys of streams and plains and have been farmed extensively. However, farming has been reserved to the plains because knobs often are too steep for agriculture. Most of the area has been logged. Forest that cover the knobs are predominantly oak-hickory, oak-pine, and pine communities.

The Bluegrass
The Bluegrass Region is a gently rolling lowland underlain by limestone and shale formed up to 450-500 million years ago. The region, about 8,000 square miles, includes three distinct subregions: the Inner Bluegrass, centering around Lexington; the Outer Bluegrass, which lies adjacent to the Knobs; and Hills of the Bluegrass (Eden Shale), which separates the two. Soils of the Inner and Outer Bluegrass are rich while those of the Hills of the Bluegrass are less fertile. The Bluegrass Region is drained by the Kentucky, Licking, and Salt rivers, which empty into the Ohio River. Caves and sinking springs are found throughout the region. Areas of glacial outwash deposits from at least two glacial advances are found in extreme northern Kentucky.

The Blue grass attracted much attention during European settlement because of its rolling topography, excellent soils, and abundance of “canelands” and game. On much of the rolling uplands, open savanna-woodlands of blue ash, bur oak, and other trees were prominent with an understory of cane, wild grasses, and legumes. These savanna-woodlands are among the most threaten ecosystems in the country. Closed-canopy forests covered the slopes and ravines along the Kentucky River, which has served as a migratory route for plants and animals.

Today, the Bluegrass is the center of the thoroughbred horse industry, and the state’s three largest population centers—Louisville, Northern Kentucky, and Lexington—are located there. The savanna-woodlands have been reduced to a few remnants of the original oak-hickory forests that had marked the Hills of the Bluegrass. Many of the springs and salt licks that attracted buffalo, elk, and other mammals have been filled in.

The Pennyroyal
The Pennyroyal or Mississippi Plateau is an upland plain underlain by Mississippian age (330 million year old) rocks, chiefly limestone and shale. The Pennyroyal covers approximately 12,000 square miles and contacts all other regions of the state except the Bluegrass. Its karst

topography is characterized by sinkholes, caves, and subsurface channels into which many streams disappear. Mammoth Cave National Park in Edmonson County is part of the most extensive cave system in the world.

Much of the Pennyroyal is drained by the Green River and its tributaries, and the Cumberland River flows into the Pennyroyal from the Cumberland Mountains. River valleys include broad, fertile bottomlands. Prior to modern agriculture, much of the western portion of the Pennyroyal was known as the "barren" a grassland, or prairie, environment. The eastern Pennyroyal is rugged, serving as the foothills of the Cumberland Plateau. Oak-hickory forests were scattered on the uplands and mixed forests were common in gorges and dissected areas.

Shawnee Hills

The Shawnee Hills or Western Coalfields Region, about 4,500 square miles in area, is separated from the Pennyroyal by low sandstone ridges. The area is hilly upland of low to moderately high relief that is divided by streams that occupy wide, poorly drained and swampy valleys or numerous types of bottomland hardwood forests. The uplands and wetlands are both characterized by oak forests, although the species of these ecosystems are substantially different. Coal has been surface mined over vast areas in the region. The region is an excellent agricultural area and has been farmed extensively. The Western Coalfields are drained by the Green River and its tributaries and by the Tradewater River. The Ohio River forms valleys on its northern border.

Coastal Plain

Also known as the Jackson Purchase and the Mississippian Embayment, the region is dominated by low hills and essentially flat land cut by shallow streams flowing into the Mississippi River. Uplands are underlain by sand, gravel, silt, and clay deposited by the last inland invasion of the seas more than 65 million years ago. It is part of the oldest northern extension of today's Coastal Plain of the southeastern United States. A silty mantle covers much of the region but is deepest along the Mississippi River where there are bluffs formed by this windblown material (loess).

The Coastal Plain is about 2,400 square miles in area. Oxbow lakes and old meanders are typical along the Mississippi and Ohio rivers. Reelfoot Lake, created by the 1811-1812 New Madrid earthquakes, just enters Kentucky from the south.