

Land cover from U.S. Geological Survey National Land Cover Data (NLCD)
Based from U.S. Geological Survey 1:100,000-scale Digital Line Graph data
Projection Universal Transverse Mercator, zone 18
North American Datum 1983

SCALE 1:100,000
0 1 2 3 4 5 6 7 8 9 10
MILES
0 1 2 3 4 5 6 7 8 9 10
KILOMETERS

CONTOUR INTERVAL 10 METERS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Digital compilation by James E. Reddy and Danielle Denenny

NLCD Land Cover Classification System

Water - All areas of open water or permanent ice/snow cover

11 **Open Water** - All areas of open water; typically 25 percent or greater cover of water (per pixel)

Developed - Areas characterized by a high percentage (30 percent or greater) of constructed materials (e.g. asphalt, concrete, buildings, etc.)

21 **Low Intensity Residential** - Includes areas with a mixture of constructed materials and vegetation. Constructed materials account for 30-80 percent of the cover. Vegetation must account for 20 to 70 percent of the cover. These areas most commonly include single-family housing units. Population densities will be lower than in high intensity residential areas

22 **High Intensity Residential** - Includes highly developed areas where people reside in high numbers. Examples include apartment complexes and row houses. Vegetation accounts for less than 20 percent of the cover. Constructed materials account for 80 to 100 percent of the cover

23 **Commercial/Industrial/Transportation** - Includes infrastructure (e.g. roads, railroads, etc.) and all highly developed areas not classified as High Intensity Residential

Barren - Areas characterized by bare rock, gravel, sand, silt, clay, or other carbon material, with little or no green vegetation present regardless of its inherent ability to support life. Vegetation, if present, is more widely spaced and scrubby than that in the "green" vegetated categories; lichen cover may be extensive

32 **Quarries/Strip Mines/Gravel Pits** - Areas of extractive mining activities with significant surface exposure

33 **Transitional** - Areas of sparse vegetative cover (less than 25 percent of the cover). Vegetation accounts for 20 to 70 percent of the cover. These areas are dynamically changing from one land cover to another, often because of land use activities. Examples include forest clearcuts, a transition phase between forest and agricultural land, the temporary clearing of vegetation, and changes due to natural causes (e.g. fire, flood, etc.)

Forested Upland - Areas characterized by tree cover (natural or semi-natural) woody vegetation, generally greater than 6 meters tall; tree canopy accounts for 25-100 percent of the cover

41 **Deciduous Forest** - Areas dominated by trees where 75 percent or more of the tree species shed foliage simultaneously in response to seasonal change

42 **Evergreen Forest** - Areas dominated by trees where 75 percent or more of the tree species maintain their leaves all year. Canopy is never without green foliage

43 **Mixed Forest** - Areas dominated by trees where neither deciduous nor evergreen species represent more than 75 percent of the cover present

Planted/Cultivated - Areas characterized by herbaceous vegetation that has been planted or is intensively managed for the production of food, feed, or fiber or is maintained in developed settings for specific purposes. Herbaceous vegetation accounts for 75-100 percent of the cover

81 **Pasture/Hay** - Areas of grasses, legumes, or grass-legume mixtures planned for livestock grazing or the production of seed or hay crops

82 **Row Crops** - Areas used for the production of crops, such as corn, soybeans, vegetables, tobacco, and cotton

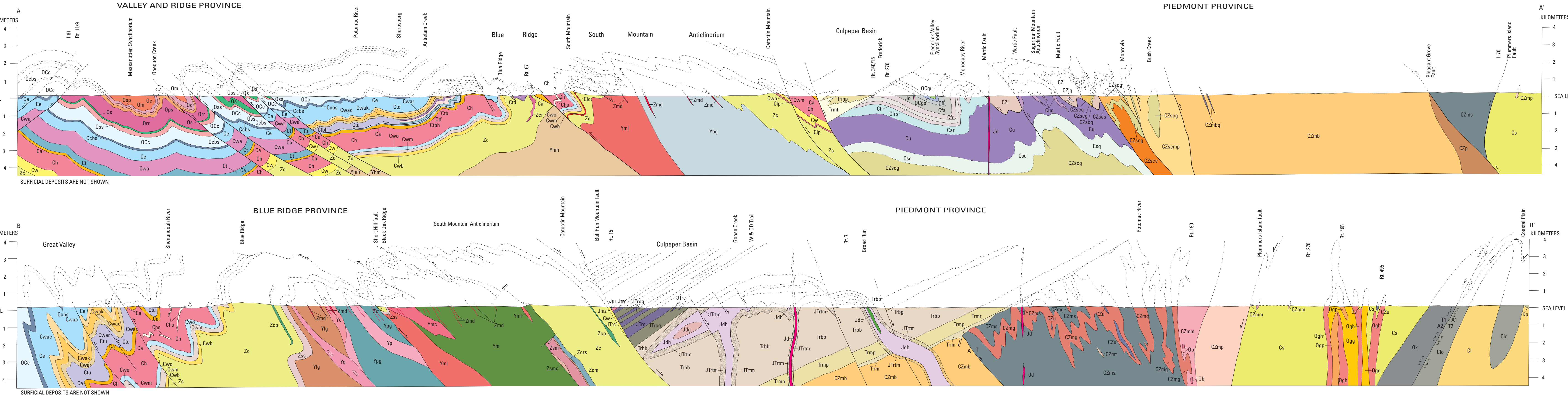
85 **Urban/Recreational Grasses** - Vegetation (primarily grasses) planted in developed settings for recreation, erosion control, or aesthetic purposes. Examples include parks, lawns, golf courses, airport grasses, and industrial site grasses

Wetlands - Areas where the soil or substrate is periodically saturated with or covered with water as defined by Cowardin et al.

91 **Wetlands** - Areas where forest or shrubland vegetation accounts for 25-100 percent of the cover and the soil or substrate is periodically saturated with or covered with water

92 **Emergent Herbaceous Wetlands** - Areas where potential herbaceous vegetation accounts for 75-100 percent of the cover and the soil or substrate is periodically saturated with or covered with water

MARYLAND
WEST VIRGINIA
VIRGINIA
MAP LOCATION



DIGITAL GEOLOGIC MAP AND DATABASE OF THE FREDERICK 30' x 60' QUADRANGLE, MARYLAND, VIRGINIA, AND WEST VIRGINIA

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This map and the accompanying text and data files are available from: <http://pubs.usgs.gov/of/2002/of02-437/>
For sale by U.S. Geological Survey, Information Services, Box 25286, Federal Center, Denver, CO 80225

