

STATE OF OHIO

BETHESDA QUADRANGLE



Area of extensive hummocky ground caused by earthflow and earth and rock slump. Lacks clear evidence of active sliding. Relatively stable in natural, undisturbed state, generally not affected by small structures properly sited in areas away from the edge of the toe; can be reactivated by extensive, rapid excavation, loading, and changes in ground water and surface water conditions. Area of old landslide probably includes recent ones not identified from field evidence or otherwide documented. Upslope boundary of landslide generally defined by modified scarp, but downslope (toe) may be gradational and not well defined. Questioned where doubtful.



COLLUVIAL SLOPE

Valley wall along major streams with slope as steep as 40° (85%); stony, clayey silt soil up to 50 ft. (15 m) thick; commonly buttressed by a terrace or bench at the toe of the slope; very susceptible to sliding by cutting of toe area, removal of terrace or bench, and overloading; landslide commonly activated without apparent cause.



AREAS SUSCEPTIBLE TO DEBRIS FLOWS AND DEBRIS AVALANCHES Primarily shallow, narrow ravines and chutes with accumulation of stony colluvium generally 10 ft. (3 m) or less in thickness; susceptible to rapid movement during intense rainfall. Most ravines designated show evidence of former debris flows and avalanches. Symbol - designates historical debris flow or debris avalanche.



coherent layer generally 8 ft. (2.5 m) or less in thickness. Zone of water commonly at the base of the clay layer is under 2 to 8 ft. (0.6 -2.5 m) artesian head. Clay soil is underlain by claystone and shale. Clay slab moves as a coherent mass up to 1 ft. (0.3 m) per year; very susceptible to more rapid sliding when overloaded by fill or structure and by excavations that break the continuity of slope. Recent soil slips (earth flows) as much as 40,000 square feet (3,700 square meters) in size are common.



SOIL AND ROCK SUSCEPTIBLE TO LANDSLIDING Soil and rock similar to that involved in landslides elsewhere in map area; primarily areas underlain by claystone, mudstone and shale associated with other rock types. Rock weathers rapidly on exposure forming clayey soil highly susceptible to sliding.

AREAS LEAST PRONE TO LANDSLIDES Map areas in which no patterns or symbols are shown; primarily valley floors, ridge tops and

broad benches; modification by excavation and

The first five digits of the open file number designate the specific 1:250,000 scale map sheet of which this quadrangle is a part. The last two digits designate the position of the quadrangle in a subdivision of the 1:250,000 scale map based on rows and tiers shown in the diagram to the right. The location of this quadrangle is shown by the black square.

fill may lead to local landslides.

sh/r regraded in part, high wall remains

Coal refuse banks identified on aerial photographs; not classified in field check

not burnt nor on fire

rbb burnt

rbd burning

rbs sludge

82°W

Quarries quarry site

qub spoil bank, quarry waste

Gravel pits g site of gravel pit

Slides in man-made features a/f earth flow in fill

a/r earth flow in coal refuse

a/s earth flow in strip castings

CANTON 1° x 2° MAP SHEET 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 41°N

no.78-1057 Bethesda, OH no. A-8 c.1

M(200)

R290



80°W 40°N