



EXPLANATION
Additional information is contained in the map accompanying this map.

RECENT LANDSLIDES
Dominantly earth slumps and earth flows characteristically recorded or characterized by fresh scars. Small landslides enclosed by triangles.

PREHISTORIC LANDSLIDES
Dominantly earth slumps and earth flows characterized by hummocky topography, relatively stable in nature, but can be reactivated by excavation, loading and changes in ground and surface water conditions. Includes some probable recent landslides not covered by records examined.

SLOPES WITH CONSPICUOUS SOIL CREEP
Clayey soils, generally less than 5 ft. thick, commonly underlain by weathered shale; characterized by shallow, slow but distinct, downslope movement that can be greatly accelerated by overloading from fills or structures.

OUTCROP AREA OF THICK "RED BEDS" AND ASSOCIATED ROCKS
Rock weathers rapidly on exposure; weathered rock and related soil commonly result in soil creep and landslides; cuts and fills in "red beds" generally not stable.

RELATIVELY STABLE GROUND
Most slopes have little susceptibility to landsliding unless adversely modified by man; slight soil creep common on undisturbed slopes.

STEEP SLOPES SUSCEPTIBLE TO ROCKFALL
Dominantly thick-bedded sandstone and limestone, 1 to over 10 ft. thick; sub-ordinate flapsy sandy shale and interbedded shale; highly fractured and locally undercut by weathering of shale; in steep natural and cut slopes and cliffs, 15 to over 100 ft. high.

MAN-MADE FILL
Heterogeneous soil and rock material; variable susceptibility to slope failure depending on nature of materials, foundation conditions, design and construction. Fills in older urbanized areas mapped only where associated with recent landslides. Fills too small to be shown by pattern identified by letter "F".

NOTE
Variations in slope sensitivity may occur at any specific point within a unit. Boundaries largely are inferred from information given is intended as a general guide and should not be construed as applicable to all localities within the area shown. This map cannot be used as a substitute for detailed engineering investigations of specific sites.

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U.S. Geological Survey
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This map is preliminary and has
not been edited for conformity
with Geological Survey standards
or nomenclature.

**LANDSLIDE SUSCEPTIBILITY MAP OF PART OF THE FREEPORT 7 1/2' QUADRANGLE,
ALLEGHENY COUNTY AND VICINITY, PENNSYLVANIA**

by
William E. Davies

Map based on 1973 aerial photographs,
field reconnaissance, 1973-74; soil
surveys by U.S. Dept. Agriculture Soil
Conservation Service, and existing geo-
logic data. This map has not been
edited or reviewed for conformity with
Geological Survey standards and nomen-
clature.
Initial data from 319th Engineer
Battalion (Hydrology) U.S. Army
Corps, 1973-74.