



EXPLANATION

fp
NEARLY LEVEL FLOOD PLAINS - Border both sides of Connecticut, Farmington, and Hockanum Rivers to widths of 1/4 to 1 mile, and form narrower stretches along Mill Brook and North and South Branches of Park River. Continuous on major rivers; interrupted on streams. Little relief, gentle slopes. Large areas have slopes less than 1 percent; slopes steeper than 5 percent are of limited extent; near stream-channel banks, slopes commonly are steeper than 8 percent. Flood plains of major rivers are less than 25 ft above sea level; those of smaller streams as much as 95 ft. Shallow marshy swales and sloughs common in cutoff meanders and behind bars; long, low swells or ridges are subparallel to length of river; all these features are especially common along Connecticut River. Small sluggish streams and straight manmade ditches drain toward major rivers; artificial and natural ponds numerous. Flood plains subject to periodic flooding of varying severity; greatest floods occasionally occupy entire flood plain. Steep manmade dikes protect parts of Hartford and East Hartford from flooding.

tp
LEVEL TO GENTLY SLOPING TERRACE PLAINS BORDERED BY NARROW BLUFFS - Discontinuous areas a few hundred yards to more than a mile wide behind the active flood plains of the Connecticut River near Farmington and Hockanum Rivers. One terrace level north and south of the Farmington River is 90 ft above sea level; another higher terrace south of the Farmington River is more than 110 ft above sea level. Terrace surfaces east of the Connecticut River range between 30 and 50 ft. Terrace plains are flat to gently sloping, featureless, and grade gently toward higher topography without pronounced slope change. Gullied terrace fronts form bluffs (escarpments) 10 to 50 ft high descending riverward with slopes 10 percent or steeper; rarely steeper than 25 percent. Channel drainage inconspicuous and unimportant. The few streams on terrace plains have low banks, shallow valleys, and gentle gradients; where streams descend through terrace fronts, they are gullied.

sp
LEVEL TO GENTLY ROLLING SANDY PLAINS BORDERED BY FAIRLY STEEP GULLED SLOPES - Occupy a few square miles in northern part of quadrangle. Highest altitudes in northwest where slightly higher than 180 ft. Surface slopes gently eastward to about 130 ft. Unit is highest plain in quadrangle; reaches altitudes higher than some elongate hills (eh). Plains are featureless with local relief less than 10 ft except near gullies. Most slopes less than 3 percent, but slopes to 8 percent common. Where gullied, slopes are steeper than 15 percent but rarely exceed 25 percent. Local relief in gullies and near edge of plain normally 10 to 20 ft, but locally as much as 40 ft. No natural marshes or lakes; short streams occupy shallow flat-floored valleys with sloping sides except in gullied stretches near edge of sandy plains where narrow and V-shaped.

gup
GENTLY UNDULATING PLAINS - Widespread west of Connecticut River. Altitudes range from about 30 ft in east to about 150 ft in west; predominantly between 70 and 110 ft. Gently grades into most other landforms except terrace plains (tp) and flood plains (fp) where juncture is abrupt. Local relief low; ground surfaces undulating. Slopes gentler than 3 percent over wide areas; small areas have slopes to 8 percent and locally slopes reach 15 percent. Numerous streams and some rivers. Valleys shallow, mostly wide with gentle valley sides. Several large swamps and marshes, mostly near heads of stream courses. Manmade ponds common. In Hartford and West Hartford, most streams diverted into conduits.

rgl
ROLLING, GULLED LAND OF LOW RELIEF - Irregular scattered areas west of Connecticut River; most commonly associated with gently undulating plains (gup) or strongly undulating plains (sup), generally where they approach streams and rivers. Altitudes range from about 100 ft to about 30 ft. Local relief rarely exceeds 50 to 60 ft. Slopes fairly steep; rarely less than 8 percent and commonly as steep as 25 percent. Numerous short tributary streams occupy steep-sided narrow valleys.

sup
STRONGLY UNDULATING PLAINS - Irregular but widespread areas west of Connecticut River. Altitudes range from about 200 ft to less than 30 ft. Most areas more than a square mile, although some plains only a few hundred feet wide. Commonly surround or are close to elongate low hills (eh). Local relief pronounced; strongest relief of the several plains units in Hartford North quadrangle; commonly 60 to 80 ft and more in places. Slopes generally 3 to 15 percent; in places steeper. Streams well spaced; normally occupy somewhat incised, flat-bottomed valleys and have many meandering stretches. In Hartford and West Hartford many streams diverted into conduits.

eh
ELONGATE, SMOOTH LOW HILLS - Occur singly and in groups west of Connecticut River. Crestal altitudes as high as 230 ft and as low as 100 ft. Lengths range from about 1,500 to 7,000 ft; widths from about 500 to 2,000 ft. Elongation generally north-south. Heights above surrounding plains generally 30 to 70 ft. Bases of hills merge into surrounding plains. Upper side slopes commonly 10 to 25 percent; most other slopes less steep; crests gently rounded. No streams or ponds.

Diagonal lines
NATURAL CONDITION SEVERELY ALTERED BY MAN OVER WIDE AREAS

Wavy lines
SAND-DUNE HILLOCKS

Line with triangles
ESCARPMENT - Long, near-continuous, steep bluff. Line represents top of slope; triangles point downslope.

REFERENCES

Barker, R.M., and Stone, C.S., 1972, Natural land slopes, Hartford North quadrangle, Connecticut: U.S. Geol. Survey Misc. Geol. Inv. Map I-784 L.
Cushman, R.V., 1963, Geology of the Hartford North quadrangle, Connecticut: U.S. Geol. Survey Geol. Quad. Map 62-223.

Base from U.S. Geological Survey, 1964
10,000-foot grid based on Connecticut coordinate system
1000-meter Universal Transverse Mercator grid ticks, zone 18, shown in blue

SCALE 1:24,000

DATUM IS MEAN SEA LEVEL
DEPTH CURVES AND SOUNDINGS IN FEET—DATUM IS MEAN LOW WATER
SHORELINE SHOWS APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS APPROXIMATELY 5.7 FEET

UTM GRID AND MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

QUADRANGLE LOCATION

LANDFORMS, HARTFORD NORTH QUADRANGLE, CONNECTICUT

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