

Preliminary surficial geologic map
South Canaan quadrangle, Connecticut

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

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EXPLANATION

Qal

Alluvium

Silt, sand, gravel, cobbles, and boulders, but predominantly sand. Occurs on broad flood plains and along a few minor upland streams. Well logs indicate thickness is generally 15 ft or less but may be at least 50 ft in Housatonic River valley. Derived from stratified drift, alluvial-fan deposits, till, and weathered bedrock. Soil is typically 1 to 2 ft thick, black to brown. Modified by meander scars and oxbow lakes, and inundated by major floods. Overlain extensively by swamp deposits and underlain by stratified drift, till, and bedrock

Qs

Swamp deposits

Black to very dark brown peat, organic silt, and traces of clay-sized material. Unstratified and poorly sorted. Occurs in extensive swamps on flood plains (Qal) and in small swamps in the uplands. Thickness ranges from 0.5 to 13 ft. Derived from alluvium, local vegetation, and slope wash. Locally modified by drainage for agricultural needs. Overlies alluvium, stratified drift, till or bedrock

Qf

Alluvial-fan deposits

Mixture of boulders, gravel, sand and silt, but predominantly gravel. Poorly sorted and stratified. Larger fragments subangular to subrounded. Composed of local bedrock; carbonate rock, gneiss, granitic rock and quartzite. Occurs in indistinct fans at the mouths of most mountain streams. As much as 50 ft thick. Maximum height above main streams is about 60 ft. Modified by rills. Overlies stratified drift, till, and bedrock

Qst

Stream terrace deposits

Silt and sand. Moderately well sorted and faintly stratified. Texture consists of variable mixtures of sand and silt with local gravel. Occurs as narrow, discontinuous, restricted unmatched terraces about 30 to 65 ft above present streams, but mostly along the Housatonic River. Probably derived from outwash, but not traceable to moraines or head-of-outwash deposits. Soil gray brown to brown, 1 to 3 ft thick. Gently rolling surface; terrace scarps are subject to undercutting by present streams. Major floods almost reach the level of lower stream terrace deposits. Generally underlain by stratified drift, till, and bedrock

Qd

Delta deposits

Cobble-pebble sand with local silt. Coarser, poorly stratified topset layer 4 to 6 ft thick generally overlies well-stratified, gently dipping foreset beds of sand and minor gravel. Large prominent flat-topped deltas occur along the Housatonic River and Salmon Creek at an elevation of about 600 ft

Qcd₄
Qcd₃
Qcd₂
Qcd₁

Ice-contact stratified deposits

Sand and gravel, with boulders, silt and flowtill. Well to poorly stratified with collapse structures, crossbedding, and current bedding. Generally kames and kame terraces

Qic

Ice-channel deposits
Gravel and sand deposited by glacial melt water in ice-walled channels. Generally eskers

Qkd₂

Qkd₁

Kame delta deposits

Predominantly sand and gravel. Similar to kames (Qcd) and deltas (Qd). Generally flat-topped and graded to a proglacial lake level

Ql

Glacial lake deposits

Sand and silt believed to represent a near shore facies of lake bottom sediments. Pattern indicates areas known or inferred to be underlain by glacial lake deposits of clay, silt, and sand. These sediments are generally overlain by alluvium, swamp deposits, and delta deposits

Qt

Till

Unsorted to poorly sorted, heterogeneous mixture of clay, silt, sand, gravel, pebbles, cobbles, and boulders. Larger fragments subangular to angular, consisting of carbonate rocks, schist, quartzite, quartz, and minor amounts of gneiss and granitic rocks. Texture typically sandy or silty and not compact. Generally thin, but locally as thick as 210 ft. Occurs as ground moraine deposited directly by glacial ice which moved in a generally northwest to southeast direction. Little modified by erosion except for minor slope wash (unmapped colluvium) or stream action on steep slopes. Much of the area mapped as till contains abundant bedrock exposures and minor amounts of stratified drift

B-f

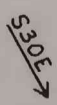
Artificial fill

550

Bedrock surface contour

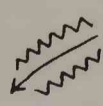
Elevation in feet above mean sea level

Contact, approximately located



Glacial striation or groove

Tip of arrow is at point of observation



Melt-water channel or spillway

Glacial melt-water channel, spillway, or outlet of a glacial lake. Arrow indicates inferred direction of flow

Materials classification

og, organic deposits

st, silt

cl, clay

s, sand

g, gravel

p, pebble

c, cobble

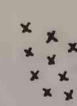
pg, pebble gravel

cg, cobble gravel

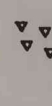
t, till

w, weathered rock or saprolite

Letter symbols indicate composition and texture of materials in decreasing abundance. Superposition indicates section. Numbers are thickness in feet



Boulder train



Talus, boulders, and landslide debris

x-5

Pebble count locality

Hypothetical position of dam for Line Rock glacial lake



Construction materials pit

Hachures indicate complex of pits



Auger hole or test pit

Rock type

Rock type	1	2	3	4	5
Quartz and quartzite	29%	55%	64%	64%	52%
Gneiss	1	7	21	8	9
Schist	27	29	9	26	31
Phyllite	--	5	2	2	6
Marble	43	4	4	--	2

Holocene

Pleistocene

QUATERNARY