



Base from U. S. Geological Survey
topographic maps

MAP SHOWING QUATERNARY GEOLOGY OF THE WARE AND QUINSIGAMOND QUADRANGLES, MASSACHUSETTS

1 2 3 4 5 Miles

1 2 3 4 5 Kilometers

Contour interval 40 feet.

Datum is mean sea level.

1924.

T. C. Chamberlin, Geologist in charge
Geology by Wm. C. Allen and B. K. Emerson
Surveyed in 1906-7

EXPLANATION

- Post-glacial deposits**
- Qm Marsh deposits (peat and much)
 - Qlt Lower stream terraces and flood-plain deposits (Terraces in part due to erosion)
 - Qht Higher stream terraces and flood-plain (Terraces in part due to erosion)
 - Qhs Lake-bottom sands and clays and lower sand bars and sand flats of glacial Lakes Hadley and Springfield
 - Qns Shore deposits of glacial Lakes Hadley and Springfield
 - Qns Normal high terraces of the flooded Connecticut River
 - Qas Glacial delta or sand-plain deposits of temporary glacial lakes at the ice front
 - Qas Sand and gravel deposits of glacial Lake Assabet and other temporary glacial lakes
 - Qas Sand and finer sediment of the closing stage of glacial Lake Nashua (Includes flood-plain silts of Nashua River)
 - Qat Sand and gravel terraces of the Ayer stage of glacial Lake Nashua
 - Qat Shore line of Ayer stage of glacial Lake Nashua (Approximate)
 - Qat Laminated clay of the Clinton stage of glacial Lake Nashua
 - Qat Sand and gravel terraces of Clinton stage of glacial Lake Nashua (Terraces due partly to deposition and partly to erosion)
 - Qat Shore line of Clinton stage of glacial Lake Nashua
 - Qat Sand and gravel terraces of Leominster stage of glacial Lake Nashua
 - Qat Sand and gravel terraces of Boylston stage of glacial Lake Nashua
 - Qat Shore line of Boylston stage of glacial Lake Nashua
 - Qat Sand and gravel deposits of Quinapoxet stage of glacial Lake Nashua
 - Qat Outflow channel (Through which streams from glacier and glacial lakes escaped over divides; direction shown by arrow)
 - Qat Ice barrier or ice-contact slope (Showing probable position of front of glacier)
- Glacial stream deposits**
- Qes Eskers (Sinuous ridges of sand and gravel)
 - Qes Outwash sand and gravel (Deposited by streams of glacial waters)
 - Qmkt Morainal or kame terraces (Chiefly sand and gravel)
 - Qmkt Terminal moraine (Some isolated patches of kame gravel included; chiefly sand and gravel)
 - Qmkt Drumlins
 - Qmkt Ground moraine (Chiefly till; generally thin with frequent exposures of bedrock)
 - Qmkt Glacial striae
 - Qmkt Clay and gravel pits (Clay; Sg, sand and gravel)
- Glacial ice deposits**

RECENT

QUATERNARY

Wisconsin stage of glaciation

PLEISTOCENE