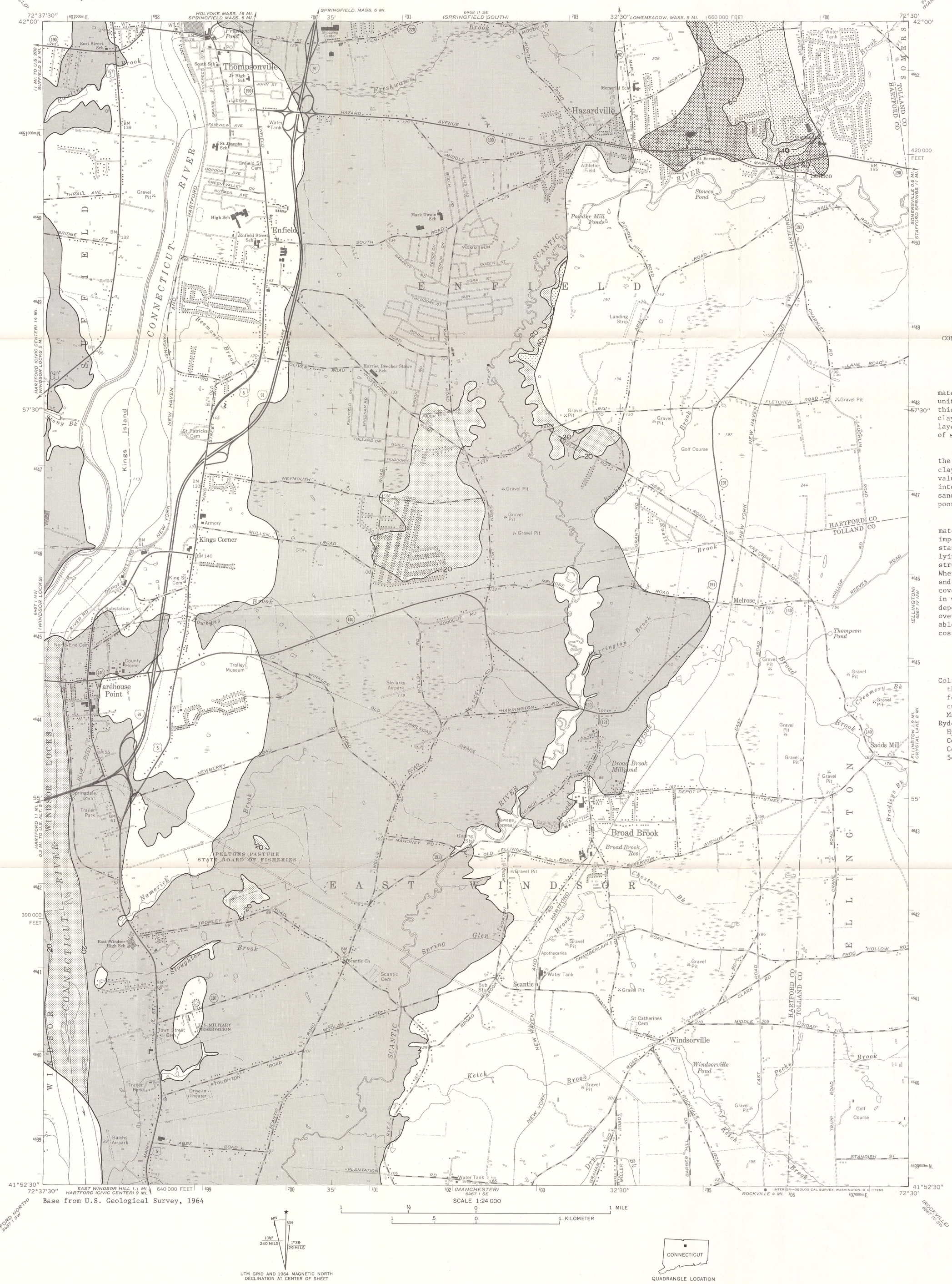
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

MISCELLANEOUS FIELD STUDIES
MAP MF— 451 D

The Connecticut Valley Urban Area Project (CVUAP) covers about 5,000 square miles from New Haven and New London, Conn., on Long Island Sound north to Brattleboro, Vt., and Keene, N.H. Major cities within the project area include New Haven and Hartford, Conn., and Springfield, Mass. Commuter traffic to these urban centers reaches almost all parts of the project area. Interstate routes provide major north-south and east-west transportation corridors. Urbanization and industrial development are likely to continue within this central valley area of New England. In order that such anticipated growth be accomplished in an orderly manner and with a minimum of adverse environmental effects, information on the nature and distribution of natural resources will become increasingly important. The objective of CVUAP is to anticipate this need by providing geologic and hydrologic information to aid in planning and resource management. This information is in the form of maps, each presenting a single resource characteristic, or combination of related characteristics of the land surface, earth materials, or water resources at a common scale and in a simplified format. This is one in a series of maps showing one of the geologic or hydrologic characteristics of the map area.

Regional and local planners and other decision makers responsible for land use and resource management, including landowners, developers, and consultants should find these maps helpful in land-use analysis. Because statutory regulations, technological capabilities, available funding, and local land-use priorities vary from place to place, and can be expected to change with time, these maps are designed to provide a resource-data base with maximum flexibility for long-term usefulness. The maps can be used in various combinations, as in a series of overlays, according to the specific needs of a particular planning problem. As planning criteria change, the selection of pertinent resource-characteristic maps can be adjusted to meet the changing needs.

CVUAP maps, or maps derived from them, are not intended to replace onsite investigations. The maps can be used, however, to identify areas of potential interest for a particular land use. These areas can then be the subject of detailed site evaluation.



EXPLANATION

CLAY INFERRED TO BE ABSENT

THICKNESS OF MATERIAL OVERLYING CLAY, IN FEET

CLAY EXPOSED OR OVERLAIN BY NO MORE THAN 20 FEET OF MATERIAL

20 TO 40

40 TO 60

GREATER THAN 60

20

CONTOUR SHOWING THICKNESS OF MATERIAL OVERLYING CLAY, IN FEET

This map shows the thickness of material overlying the principal clay unit. The clay unit may consist of a thick, massive bed of relatively pure clay, or it may consist of discrete layers of clay alternating with layers of silt and very fine sand (varved clay).

Locally the actual thickness of the material overlying the principal clay unit may differ from the mapped value because the clay grades upward into layers of silt and very fine sand. The contact is these areas is poorly defined and must be estimated.

The thickness of unconsolidated material overlying clay deposits is important for many reasons. Substantial thicknesses of material overlying clay may allow the founding of a structure in these overlying materials. Where the overlying material is thick and easily worked, it may provide cover material for a landfill operation in which the host material is the clay deposit. Areas with thin deposits overlying clay are potentially favorable for extracting clay at minimum costs for stripping.

SOURCES OF DATA

Colton, R. B., 1965, Geologic map of the Broad Brook quadrangle, Hartford and Tolland Counties, Connecticut: U.S. Geol. Survey Geol. Quad. Map GQ-434.

Ryder, R. B., and Weiss, L. A., 1971, Hydrogeologic data for the upper Connecticut River basin, Connecticut: Connecticut Water Resources Bull. 25, 54 p.

Base from U.S. Geological Survey, 1964

SCALE 1:24 000

UTM GRID AND 1964 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

QUADRANGLE LOCATION

MAP SHOWING THICKNESS OF MATERIAL OVERLYING PRINCIPAL CLAY UNIT, BROAD BROOK QUADRANGLE, CONNECTICUT

By

William H. Langer

1973

For sale by U. S. Geological Survey, price 50 cents