DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH THE
NEW HAMPSHIRE WATER RESOURCES BOARD

HYDROLOGIC INVESTIGATIONS
ATLAS HA-441 (SHEET 1 OF 2)

LITHOLOGIC SECTIONS

0.5 MILE NORTH OF SURRY VILLAGE
LOOKING NORTH
0 250 500 1000 FEET
DATUM IS MEAN SEA LEVEL
VERTICAL EXAGGERATION × 10

1.5 MILES SOUTH OF SURRY MTN. DAM
LOOKING NORTH
0 250 500 1000 FEET
DATUM IS MEAN SEA LEVEL
VERTICAL EXAGGERATION × 10

ASH SWAMP BROOK PLAIN EAST OF KEENE
LOOKING NORTH
0 500 1000 2000 FEET
DATUM IS MEAN SEA LEVEL
VERTICAL EXAGGERATION × 20

0.5 MILE SOUTH OF WILSON POND
LOOKING NORTH
0 250 500 1000 FEET
DATUM IS MEAN SEA LEVEL
VERTICAL EXAGGERATION × 10

0.5 MILE WEST OF WESTPORT
LOOKING NORTH
0 250 500 1000 FEET
DATUM IS MEAN SEA LEVEL
VERTICAL EXAGGERATION × 10

SUNNY VALLEY, 1.5 MILES SOUTHEAST OF WINCHESTER
LOOKING NORTHWEST
0 250 500 1000 FEET
DATUM IS MEAN SEA LEVEL
VERTICAL EXAGGERATION × 10

From data furnished by
U.S. Army Corps of Engineers

2 MILES SOUTH OF SWANZEY
LOOKING NORTH
0 250 500 1000 FEET
DATUM IS MEAN SEA LEVEL
VERTICAL EXAGGERATION × 10

0.3 MILE EAST OF EAST SWANZEY
LOOKING NORTHEAST
0 250 500 1000 FEET
DATUM IS MEAN SEA LEVEL
VERTICAL EXAGGERATION × 10

EXPLANATION

▨ Sand

▨ Sand and gravel

▨ Clay and silt
Spackled where sandy

▨ Till

▨ Bedrock

5
Test hole
and number

Numbered in the
order drilled

GROUND-WATER-FAVORABILITY MAP

EXPLANATION

The areas delineated on the map show their relative favorability for ground-water exploration. The map is based on mapping of surficial deposits and on available subsurface geologic and hydrologic data. Although the interpretations are generalized, they provide a logical basis for selecting sites for future ground-water exploratory test drilling

AREAS OF POTENTIAL GROUND-WATER DEVELOPMENT

■ Excellent potential

Properly constructed wells in these aquifers should be capable of sustained yields sufficient for municipal and large industrial supplies. Underlain by thick deposits of stratified glacial drift that consist of ice-contact or glacial outwash sediments. The water-bearing material is principally coarse sand and gravel having a relatively great saturated thickness and subject to large amounts of recharge, either from precipitation or by induced infiltration from adjacent fine-grained sediments or from nearby streams and lakes, or both

■ Moderate potential

Properly constructed wells in these aquifers should provide sustained yields adequate to meet small community and industrial needs. Underlain by stratified glacial drift that consists of very permeable coarse sand and gravel deposits that are relatively thin, and of limited storage capacity, or that consist of fine to medium lacustrine or deltaic sand of moderate permeability but of great saturated thickness and large storage capacity. Sustained yields of wells in the coarser but thinner aquifers must be restricted because of the danger of depleting the water in storage of pumping exceeds the rate of recharge. Wells drilled in the finer material will yield smaller quantities of water to individual wells because of the lower permeability of the aquifer, but the great saturated thickness would generally permit sustained pumping without seriously reducing the amount of water in storage. Areas indicated as having only moderately favorable potential probably include locally deposited coarse sand and gravel of high permeability that might yield large supplies of water to wells. These potential high-yield aquifers may be interbedded with or lie at the base of the finer sediments and can be located only by carefully planned test drilling

■ Low potential

Underlain by bedrock, till or by fine or poorly sorted glacial drift and swamp deposits that generally will yield only enough water to wells to meet domestic and farm requirements. Wells in bedrock are often drilled to considerable depth below the water-bearing zone to provide additional storage because of the small storage capacity of the rock. In some areas, however, a properly constructed well might yield an adequate supply for several homes or for a recreational area. Wells in till normally are dug and are of large diameter to provide storage because of the slow rate of infiltration of water into the wells

○ 8
Well in unconsolidated material

● 6
Well in bedrock

⊘ 2
Water-level observation well

◍ 1
Auger-sampling site or test hole

▲
Stream-sampling site

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Basin boundary

INDEX MAP OF NEW HAMPSHIRE

GROUND-WATER RESOURCES OF THE ASHUELOT RIVER BASIN, SOUTHWESTERN NEW HAMPSHIRE

By
Harold A. Whitcomb

SCALE 1:62 500
1 ½ 0 1 2 3 4 5 MILES
1 .5 0 1 2 3 4 5 KILOMETERS
CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

1973

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For sale by U.S. Geological Survey, price $1.00 per set