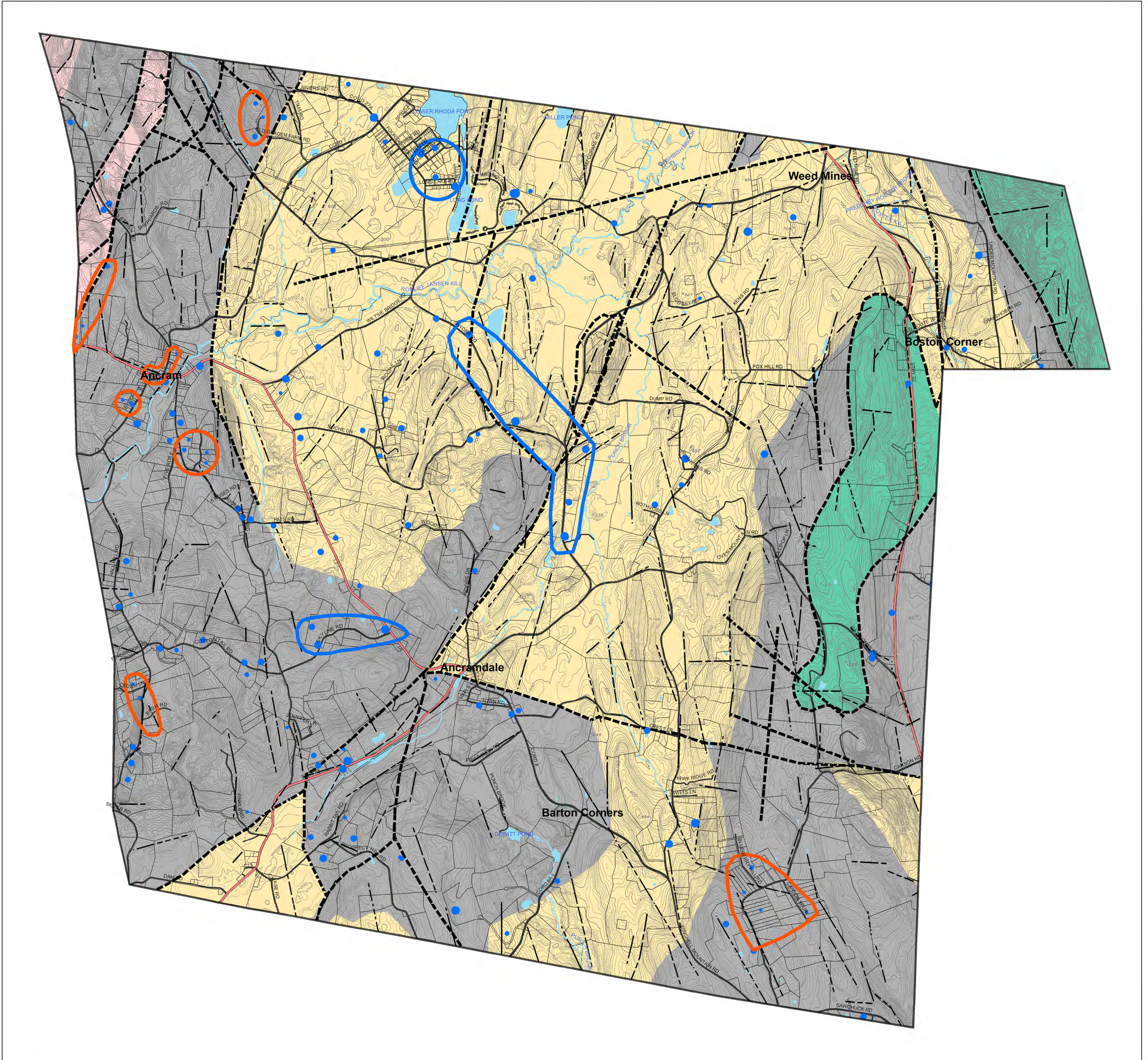




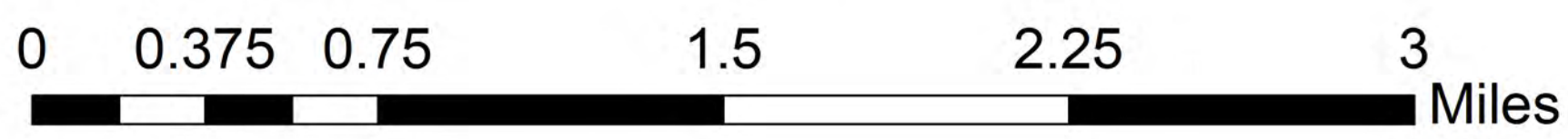
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Bedrock Well Yields and Bedrock Hydrostratigraphic Units Town of Ancram, New York

Steven Winkley
 2008



Scale



Legend

Reported Bedrock Well Yield

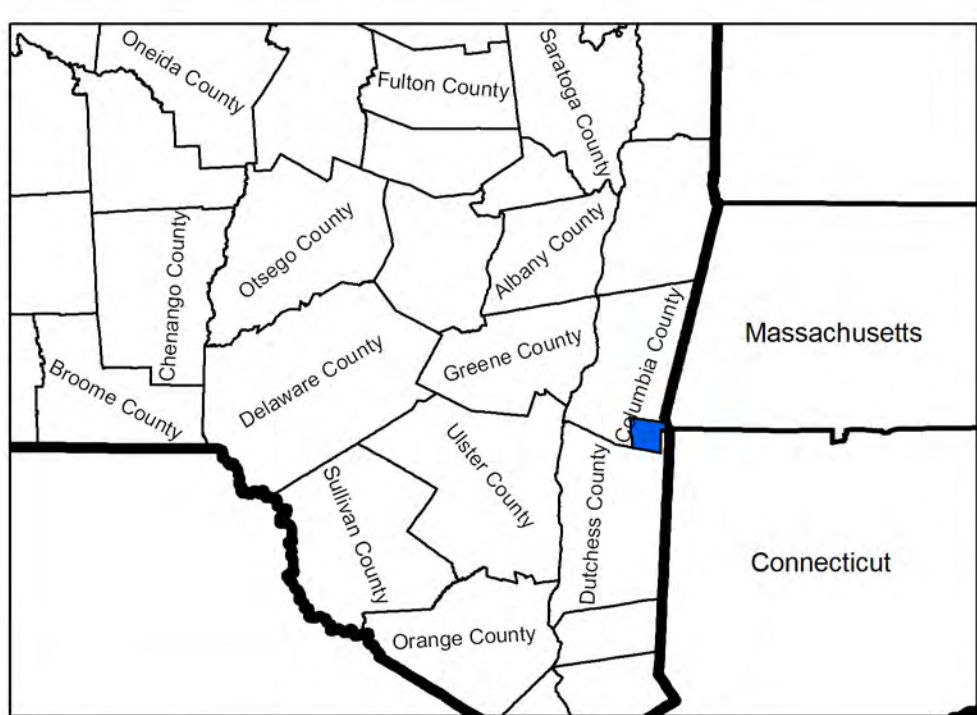
Gallons per minute

- 0.5 - 1
- 1.5 - 2.5
- 3 - 4.5
- 5 - 10
- 11 - 20
- 21 - 50
- > 50

- Higher Yield Area
- Lower Yield Area

Bedrock Hydrostratigraphic Unit

- Everett Schist
- Austin Glen Graywacke & Shale
- Walloomsac Slate & Phyllite
- Stockbridge & Wappinger Carbonates including Balmville Limestone
- Fault (from NYSGS)
- Topographic Linear (from NYRWA)
- Local Road
- County Road
- State Highway
- Stream
- Water Body



Location of Ancram, New York

About This Map:

This map shows the type and distribution of hydrostratigraphic units, bodies of rock with considerable lateral extent that have similar hydraulic properties. For the most part, these hydrostratigraphic units coincide with geologic formations or groups.

Also depicted on this map are the reported yield (in gallons per minute) of water wells in Ancram. These yields are the rates reported by local well drillers, typically at completion of the well.

Highest water well yields are typically found where fractures (cracks) in the rock are concentrated. These bedrock fracture zones are often associated with mapped faults or linear depressions. Such features are included on this map. The approximate location of faults is taken from the New York State Geological Survey, New York Rural Water Association mapped the location of topographic linears from the analysis of digital elevation models.

How This Map Was Made:

The sources of bedrock geologic contacts utilized for this map were principally from the Geologic Map of New York State published in 1970 by the New York State Geological Survey (NYSGS). The Town of Ancram is located on two different 1:250000 map sheets: the Hudson-Mohawk, and the Lower Hudson. The NYSGS digitized the Geologic Map of New York State in 1999.

Steven Winkley of New York Rural Water Association made adjustments to the position of geologic contacts based upon available subsurface data.

Uses of This Map:

This map shows the generalized bedrock groundwater resources in the Town of Ancram. The two most widely utilized bedrock hydrostratigraphic units are the Walloomsac Formation and the Stockbridge and Wappinger Group Carbonates. The Walloomsac consists of black phyllite and slate (metamorphosed shale). It is not highly permeable, with a median well yield of just 4 gpm. 47% of wells completed in the Walloomsac Formation produce less than 3 gpm (the minimum yield required for a FHA loan). Similarly, 24% of residents in Ancram that have wells completed in the area underlain by the Walloomsac Formation report that they have insufficient water.

In contrast, the rocks of the Stockbridge & Wappinger Carbonates (limestone, dolostone, and marble) are more permeable and are subject to enlargement of fractures from dissolving of the rock. The median well yield in this unit is 8 gpm. Approximately 28% of wells completed in the Stockbridge & Wappinger Carbonates produce less than 3 gpm. Only 10% of residents that have wells completed in the area underlain by the carbonate unit report insufficient water.

The New York Rural Water Association makes no guarantee, expressed or implied, regarding the correctness of the interpretations presented on this map and accept no liability for the consequences of decisions made by others on the basis of the information presented here. The geologic interpretations are based on data that may vary with respect to accuracy of geographic location, the type and quantity of data available at each location, and the scientific and technical qualifications of the data sources. This map is not meant to be enlarged.