

WELL YIELDS

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EXPLANATION
ESTIMATED WATER YIELD FROM A PROPERLY CONSTRUCTED WELL,
in gallons per minute, modified from Crain (1966)

- 1 Less than 50--both water-table and confined aquifers
- 2 25 to 100--water table in tributary stream infiltration areas and confined aquifer
- 3 50 to 250--confined aquifer
- 4 250 to 1,000--confined aquifer receiving recharge from valley-wall deltaic deposits

- BOUNDARY OF WELL-YIELD UNITS--approximately located
- - - - - AQUIFER BOUNDARY--dashed where full extent of aquifer is not shown
- - - - - BOUNDARY OF CONFINED AQUIFER
- 00676000 COMMUNITY WATER SYSTEM WELL OR WELL FIELD--numbered by New York State Department of Health

NOTE

Estimated yield to individual wells is based on the most productive water-bearing deposits underlying each area. Well yields are estimates of the maximum long-term yields of 6-inch or greater diameter wells that fully penetrate the aquifer. Yields are based on permeability and thickness of the aquifer and yields of wells; data mainly from Crain (1966).

Well yields in the Cassadaga and Conewango valleys range from 1 to 1000 gals/min. The high yields, from 250-1000 gals/min, are in the confined-aquifer areas in the center of the valley, from Ross Mills to Jamestown, and in the Poland Center area. These areas contain permeable gravel and sand overlain by silt and clay. The lowest yields, less than 50 gals/min, occur along the edge of the valley where the aquifer is unconfined, clayey, and saturated thickness is less than 25 feet. Long-term yields may be affected by many hydrologic factors, such as well design and proximity to other pumping wells.

REFERENCE CITED

Crain, L. J., 1966, Ground-water resources of the Jamestown area, New York, with emphasis on the hydrology of the main stream valley: New York State Water Resources Commission Bulletin 58, 167 p.

