

INTRODUCTION

Detailed mapping of the glacial aquifer within the Ramapo River and Woodbury Creek Valley in Eastern Orange County is the latest study in the cooperative Detailed Aquifer Mapping Program between the US Geological Survey (USGS) and the New York State Department of Environmental Conservation (NYSDEC). The aim of the program is to map glacial aquifers in New York State at a scale of 1:24,000. This information is used by NYSDEC Division of Water and others for delineation of groundwater contributing areas, assessing potential threats to aquifers from both point and non-point sources, responding to contamination from spills or leaks from underground storage facilities, and providing information to assess the need to permit new or expanded public water supplies. Study areas are based on NYSDEC program needs.

Objective and Study Area - The objective of this study is to characterize the hydrogeology of the valley-fill aquifer in eastern Orange County that extends from Tuxedo Park northward to Mountainville, with a spur that extends eastward at Harriman towards Monroe (figure 1). The Ramapo River overlies the southern section of the valley aquifer, and Woodbury Creek overlies the northern section. Route 17 and the New York State Thruway parallel most of the valley-fill deposits.

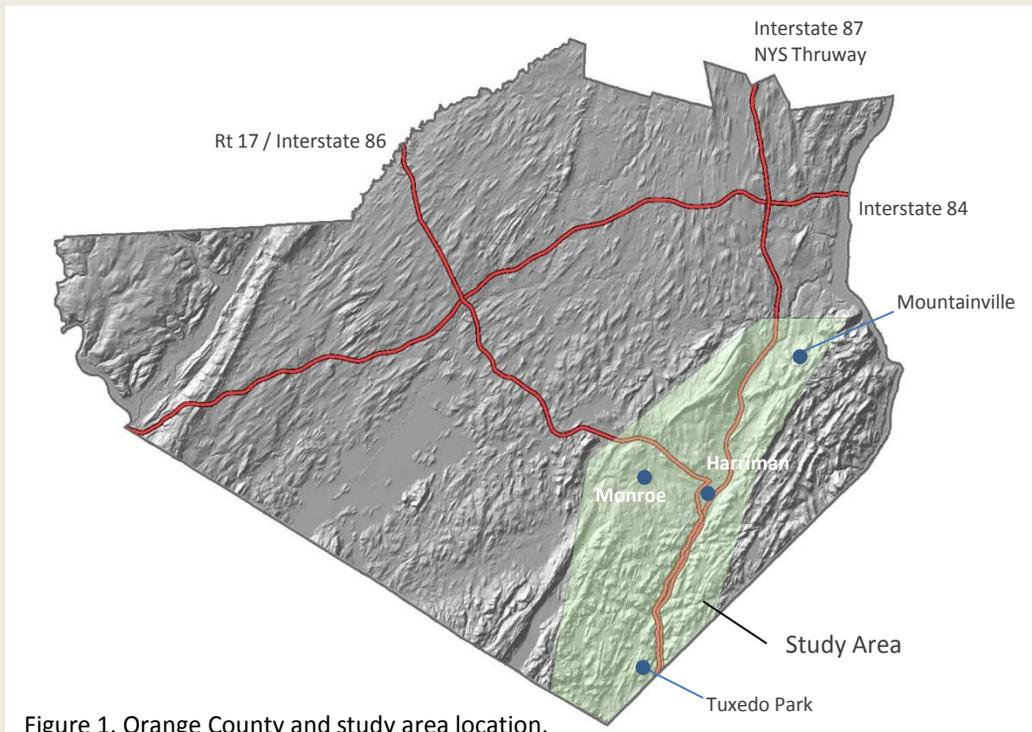


Figure 1. Orange County and study area location.

Approach - An inventory of wells and groundwater use will be conducted. The depth to bedrock and character of the valley fill will be determined from well logs and from geophysical measurements. Maps will be prepared (as data allows) that depict the (1) aquifer extent, (2) locations of wells and test holes, (3) surficial geology, and (4) generalized water-table contours and groundwater-flow directions. A table will be compiled that presents construction and hydrogeologic information from the inventoried wells. Several geologic sections will depict the aquifer framework.

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