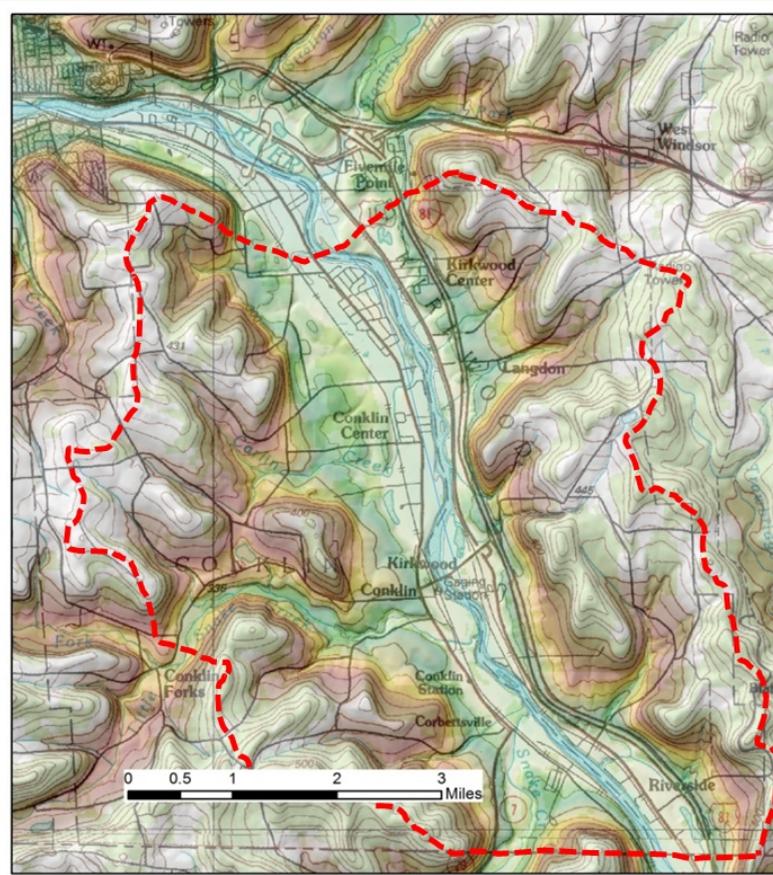


# Detailed Aquifer Mapping in the Susquehanna River Valley in South-Central Broome County – Towns of Conklin and Kirkwood

## INTRODUCTION

Detailed mapping of the valley-fill aquifer within the Susquehanna River valley and adjacent tributary valleys in south-central Broome County (Towns of Conklin and Kirkwood) 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 sand and gravel aquifers in New York State at a scale of 1:24,000. This information is used by NYSDEC Division of Water and others to delineate groundwater contributing areas, assess potential threats to aquifers from both point and non-point sources, respond to contamination from spills or leaks from underground storage facilities, and provide 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 delineate the extent of stratified glacial and post-glacial deposits within an 8-mile section of the Susquehanna River valley and to characterize the underlying hydrogeologic framework – specifically the distribution of saturated sand and gravel deposits and their degree of confinement by fine-grained deposits. The study area extends from Five Mile Point in Kirkwood to the Pennsylvania border, near Riverside, N.Y. (figure 1). The EPA SDWIS database indicates that community groundwater supplies serve about 6,000 people in the area. Interstate 81 follows this segment of the Susquehanna River valley.

**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 allow) that depict the (1) aquifer extent, (2) locations of wells and test holes, (3) surficial geology, and (4) generalized groundwater-flow directions. Construction and hydrogeologic information from the inventoried wells will be compiled. Several geologic sections will depict the aquifer framework.

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