



## PROJECT BRIEF

# Catskill Delaware Aqueduct GeoTesting

## PROJECT PROFILE

### CLIENT:

Hatch, Mott MacDonald, Malcolm Pirnie JV

### LOCATION:

Dutches, Orange, and Putnum Counties, NY

### VALUE:

- Worked closely with the client to select samples and develop a test program that met the evolving project needs
- Provided test results within three weeks of the completion of each group of test borings

### SERVICES PROVIDED:

- Geotechnical rock testing



## GEOTESTING

GeoTesting Express, Inc. (GTX) provided an extensive, high quantity rock testing program in support of the preliminary design effort being undertaken by the joint venture of Hatch Mott MacDonald/Malcolm Pirnie. The testing included:

### Rock tests included:

- Elastic moduli of rock in uniaxial compression
- Unconfined compression
- Cerchar abrasivity
- Splitting tensile
- Slake durability
- Point load index of rock
- Total hardness
- Schmidt hammer
- Axial swelling of rock
- Unit weight
- Porosity
- Specific gravity
- Petrographic analysis
- X-ray diffraction analysis
- Drillability



## BACKGROUND

The New York Department of Environmental Protection (DEP) is responsible for supplying New York City with drinking water. Eighty-five percent of New York's water is supplied by DEP's Catskill and Delaware Aqueducts. These aqueducts consist of two 75-mile long deep rock tunnels. Our client was selected by the DEP to undertake facility planning associated with the design of a Third Aqueduct to strengthen this critical water distribution. In addition, the project includes the design of a bypass tunnel to eliminate a section of the existing Delaware Aqueduct under the Hudson River that is currently leaking 15 to 35 million US gallons per day.