Client Challenge

During the middle 1980s, the City of Pittsburgh, Pennsylvania experienced rapid decline in population and economic activity. There were little or no nighttime activities in the downtown section of the City. Through studies conducted by regional and national agencies, the City of Pittsburgh became aware of the need for high quality residential housing. Such housing would promote the re-growth of City neighborhoods.

As part of a comprehensive plan to revitalize the City of Pittsburgh, the Housing Authority of the City of Pittsburgh, HACP, entered into an agreement with McCormack Baron Salazar, LLC, a private property developer, to develop several properties in the Bedford Avenue Neighborhood of the City. Initial geotechnical engineering investigation of the development site revealed the presence of shallow groundwater and probable mine voids. The HACP then issued a task order request to Multi-Lynx Companies, Inc. to conduct a groundwater investigation of the development site, and to prepare recommendations for stormwater and groundwater management, and mine void remediation.

Scope of Work

The objective of the investigation was to determine the source(s) of the shallow groundwater, develop a stormwater management plan, and to verify the presence or otherwise of mine voids reportedly observed at the excavation of previous structures within the development site. Multi-Lynx was also requested to develop an action plan that would allow resumption of demolition and excavation activities for the proposed new construction.

Multi-Lynx reviewed documents and records maintained by various authorities and agencies to determine the history and subsurface conditions of the site.

Site Investigation Activities

Multi-Lynx installed several soil borings and temporary groundwater monitoring wells on the site. Groundwater levels at the wells were measured five days per week for a two-week period.

Development Site

Groundwater samples were collected from the wells and analyzed in the laboratory in accordance with federal, state and local environmental health standards. In addition, Multi-Lynx measured groundwater temperature, pH, and other water quality parameters daily, for a five-day period.

The water in the excavations was associated with shallow groundwater within the site. Some contribution was indicated from sewer and waterline leaks. No environmental issues of concern or evidence of acid mine drainage chemical characteristics were identified that warranted environmental remedial actions.