



## Water and Sewer

Sci-Tek was recently awarded the Dooker

Hallow Stream Mitigation Project, which will involve removing acid mine drainage from a combined sewer

Sci-Tek provides expert services for the water and wastewater treatment and collection industry. Our capabilities include:

### Facilities Engineering and Planning Services

#### **Wet Weather Engineering and Planning for Allegheny County Sanitary Authority (ALCOSAN).**

Sci-Tek is providing engineering services in support of development of a Long Term Wet Weather Control Plan to reduce the effects of rain and groundwater infiltration and inflow into the waste water system with the objective of determining the general condition of the collection systems and identify where improvements can be made to enhance water quality. Our services have included environmental planning and data collection, sanitary sewer flow monitoring, data quality review, analysis, and integration into geo-spatial data bases, and modeling services inclusive of Tier-2 model-building, model calibration, production runs, and reporting.

**Environmental Assessments for Pennsylvania American Water Company.** Sci-Tek provided several environmental site assessments in support of capital improvement projects. The scope of work consisted of the following: Becks Run Pump Station in Pittsburgh - asbestos containing materials (ACM) and hazardous materials surveys and a limited Phase II Environmental Assessment (subsurface investigation); Hays Mine Facility in Pittsburgh - asbestos and hazardous materials surveys; and Jack Clutter Dam Pump Station in Claysville - Phase I Environmental Assessment, and asbestos and hazardous materials surveys.

**Existing Conditions Report Preparation for ALCOSAN.** Sci-Tek provided detailed facilities planning studies for several collection system basins associated with preparation of Existing Conditions Reports. Tasks have included sewer flow monitoring, identification of regulatory permitting requirements for conveyance, storage, and treatment, and environmental and geotechnical evaluations of alternatives for potential facility sites.





**Chartiers Basin Geotechnical Evaluation.** ALCOSAN is working to eliminate sanitary sewer overflows at several locations along its interceptor system in the Chartiers Basin near Pittsburgh. Sci-Tek conducted a basin wide geotechnical study as a part of the evaluation of potential sites. Capital improvements, including location of additional facilities in the basin are required. Sci-Tek engineers obtained available basin-wide geotechnical data, assembled the data into a useful form, and provided a written report and mapping that summarized the data obtained and identified geotechnical issues that will need to be considered for potential development sites within the Basin. The data obtained supported decision making processes relative to the mitigation or avoidance of adverse conditions such as existing landslides or landslide-prone soils, mine subsidence, acid mine drainage, etc.. The study encompassed thorough examinations of aerial photographs; topographic, geologic, deep mine and landslide susceptibility maps; available reports; and public information.

## Hydraulic Engineering and Design

**Pump Station Design for Pittsburgh Water and Sewer Authority.** Sci-Tek provided design of a filter backwash recycle pump station for the Pittsburgh Water and Sewer Authority (PWSA) utilizing the Hydraulic Institute's confined wet well design criteria. Sci-Tek evaluated and designed process and mechanical elements for the planned filter backwash/water recycle pump station and force main at the treatment plant. The scope of work involved the design of components of the recycle pumping system, preparation of a Basis of Design Memorandum, construction drawings and construction specifications. Additionally environmental consulting was provided including site inspections, water quality sampling, and development of remedial plans for lead, asbestos, and mold abatement.

## Water Resources Engineering

**ALCOSAN Jacks Run Stream Separation Project.** Sci-Tek provided design and permitting services as part of the design for the Jacks Run Sewer Stream Separation Project. The project included new construction, rehabilitation and repairs to a stream culvert, and creek environment restoration. The 2.5 acre site consists primarily of the stream and adjacent brush covered bank areas. Significant portions of the stream are enclosed in a culvert of various sizes, materials, and age. Two open reaches of the stream will be restored to natural condition. Sci-Tek prepared an Erosion and Sediment Pollution Control Plan (E&S Plan) in accordance with the PA DEP Erosion and Sediment Pollution Control Program Manual and obtained a Chapter 105 Water Obstruction and Encroachment Permit for the project.

Certified MBE

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