

ALCOSAN Wet Weather Program

Owner:

Allegheny County Sanitary Authority (ALCOSAN)
Pittsburgh, PA

Clients:

CDM Smith
Jacobs Engineers

Role:

Program Director
Technical Advisor: Geotechnical and Tunnel Engineering
Tunnel Program Management:
Cost & Schedule
Constructability

Key Characteristics:

- \$3.6B Program
- 14-miles of 18-ft dia. 120- to 350-ft deep tunnels in sedimentary rock
- Design-Bid-Build Project Delivery
- Construction in an urban environment

Professional Services:

From: January 2017
To: Present

Allegheny County Sanitary Authority (ALCOSAN) is implementing a federally mandated Wet Weather Plan (WWP) to eliminate sanitary sewer overflows (SSOs) and significantly reduce combined sewer overflows (CSOs) into the Allegheny, Monongahela, and Ohio Rivers. The scope will include approximately 14-miles of 18-foot diameter regional tunnels in sedimentary rock, overflow mitigation measures, green solutions, and a new 120-mgd Wet Weather Pumping Station to be located at the ALCOSAN's existing Woods Run Wastewater Treatment Plant.



Phase I Drilling at ALCOSAN's Treatment Plant

As part of the Program Director Team, JCK Underground was a technical resource for geotechnical and tunneling expertise and provided strategic advice to manage program risks. Tasks included: overseeing program wide geotechnical standards, implementing the Phase I geotechnical investigation, and conducting investigations of prior, local tunnel construction experience.

As part of the Tunnel Program Management Team, JCK Underground continues to assist ALCOSAN performing tasks that include guidance regarding site selection and feasibility studies, cost estimating and scheduling, risk identification and mitigation, and a continued role



Blasting Operations for the Existing 1950's Tunnel System

providing oversight of geotechnical investigations. JCK Underground also introduced the use of geographic information systems (GIS) analysis to augment the site selections and feasibility studies as well as to create a program-wide geologic map.

Link: <https://www.alcosan.org/our-plan/plan-documents/clean-water-plan>

“...JCK Underground's summary report of existing tunneling was a real eye opener that provided ALCOSAN additional insight on geology. ...”

-Mike Lichte, ALCOSAN Manager of Planning