

Project Name

Mercer Corporate Park Site Restoration

Client

Thompson Realty Co. of Princeton

Services Provided

- Establishment of Background Conditions
- Hydrogeologic Site Evaluation
- Identification of Design Deficiencies
- Preparation of Stormwater Model

Project Description

This 90-acre site was mined during the 1970s to provide gravel for the construction of I-195. A vast majority of the site was excavated, resulting in a manmade drainage ditch and five-acre pond. The pond was excavated to below the water table in order to dewater the site for further mining operations. In the late 1970s, a 61,500 square foot office building was constructed, with stormwater being discharged into the manmade lake. When mining ceased, the remnant heavy soils, such as sandy clays and clays, were left exposed. The drainage ditch allowed the pond to lower the groundwater table, which led to an increase in non-point source load to the downstream surface water bodies. The Client retained SAI in 2009 to develop a plan to restore the area.

Approach

SAI determined that the manmade pond and drainage ditch were excavated into the groundwater table, creating an unnatural situation and negatively impacting local groundwater tables and downstream surface water bodies. SAI completed a hydrogeologic evaluation of the Site and determined that the design elevation of the weir in the pond was established incorrectly. This resulted in an estimated 100,000 gallons per day of groundwater exiting the site via the drainage ditch.

SAI reviewed existing stormwater calculations, stormwater management design and available hydrogeologic information to identify a number of design deficiencies that required remediation.

Field staff performed field work to establish background conditions at the site. This included collecting additional soil and groundwater data to establish the depth to groundwater, seasonal high water table, and infiltration capacity of the exposed soils. SAI installed soil borings and additional monitoring wells, and collected water level information to complete a site-specific hydrogeology model.

SAI utilized a subcontractor to survey the monitoring wells, the stormwater facility locations and inverts, and the locations of existing structures. This survey was then used to prepare an Existing Condition Stormwater Model that better reflected the actual conditions pertaining to groundwater recharge and stormwater runoff at the site.

Compiling all of the information available, SAI prepared a thorough Storm Water/Groundwater Design Analysis Report and preliminary environmental restoration plan for the Client. This document outlined the problems with the original system design and provided ample up-to-date and site-specific information to allow



for a comprehensive and efficient water management system to be designed and installed at the site in the future.

[Project Impacts](#)

SAI's efforts have allowed our Client to move closer to their goal of constructing three additional office buildings, a flex office/warehouse, and a hotel at this site to serve the needs of the surrounding community of Robbinsville.