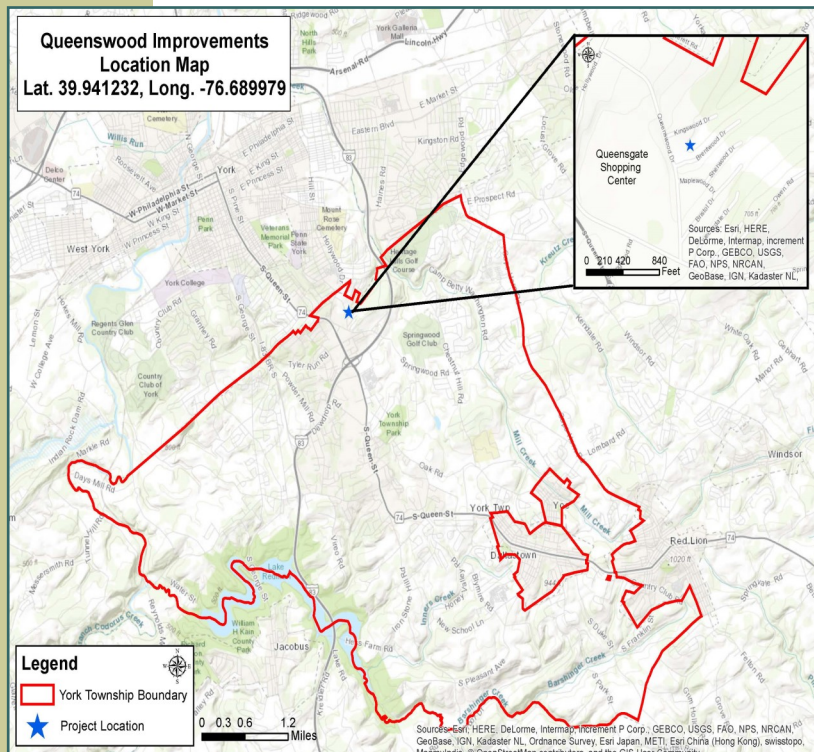


QUEENSWOOD IMPROVEMENTS STREAM RESTORATION

BACKGROUND:

York Township holds and maintains an MS4 (Municipal Separate Storm Sewer System) Permit from the Pennsylvania Department of Environmental Protection (PA DEP) to be able to discharge stormwater into local surface waters untreated. One component of the MS4 permit is preparation and implementation of a Chesapeake Bay Pollutant Reduction Plan (CBPRP) in which the goal is to reduce sediment, phosphorus and nitrogen in our local waters, and therefore the Chesapeake Bay. York County created the York County Stormwater Consortium as a regional effort to fulfill CBPRP requirements for all participating municipalities, and York Township is a participating member. One of the projects included in the CBPRP is the Queenswood Improvements Stream Restoration project (#68).



LOCATION & PROJECT GOALS:

The project consisted of stream and floodplain restoration along a 900 linear feet section of an unnamed tributary to Mill Creek in York Township, York County, PA . The stream starts under the Queensgate Shopping Center and exits into the channel to the east of the shopping center.

There is minimal stormwater management for the shopping center and apartment complexes that surround the project site. As a result, the stream receives very flashy flows that are higher than normal due to the amount of impervious surface, and created heavily eroded stream banks. The main goals of the project were to not only reduce sediment pollution to downstream resources and contribute to fulfilling the Consortium's sediment reduction goal, but to also help Township residents concerned about their only access drive being undermined by the eroding stream banks.



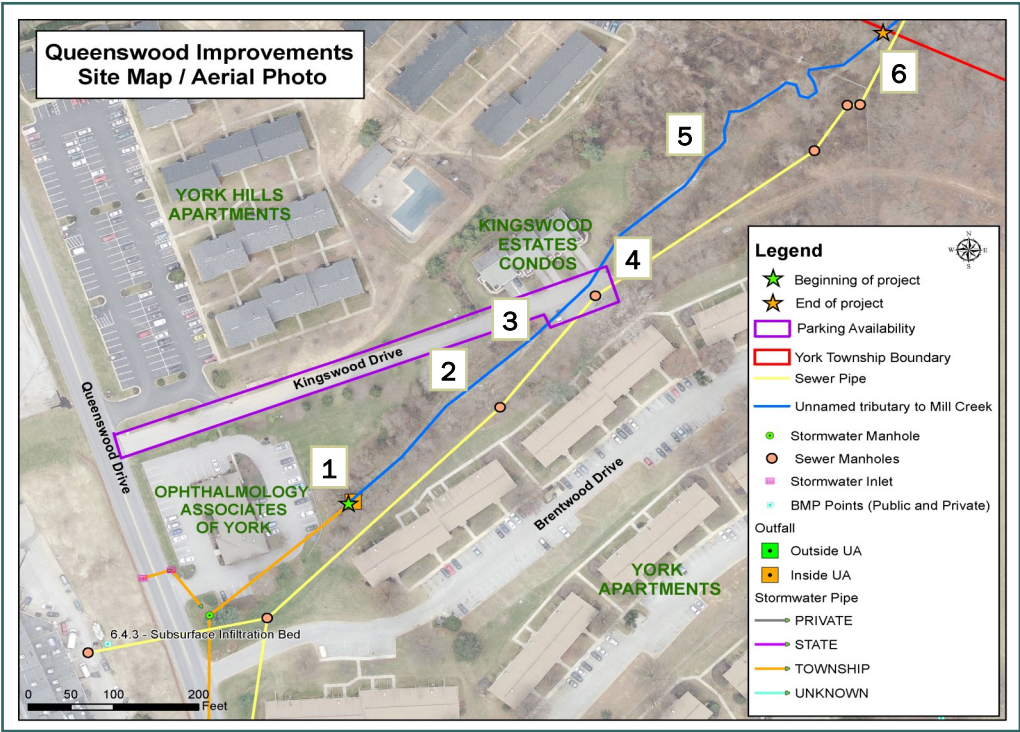
1. Main 36-inch outfall



2. Outfall from apartment complex to the south



3. 72-inch storm pipe entrance under parking area facing downstream



4. 72-inch storm pipe exit on downstream side facing upstream



5. Floodplain & wetland area



6. Weir structure & sanitary sewer encasement facing upstream

DESIGN, PERMITTING, & CONSTRUCTION:

To accomplish the goal, Gordon L. Brown & Associates was contracted to provide design & permitting services. Best Management Practices (BMPs), such as cross rock vanes, rock and log drop structures, toe rock protection, etc. were utilized. A concrete weir structure was also incorporated to enhance the floodplain and wetlands by holding back high flows of water allowing for greater infiltration and wetland benefits. The estimated sediment reduction for the project was 106,902 lbs./year. Design began in April 2019, and was completed January 2025.

A Water Obstruction and Encroachment permit from the PA DEP was required for this project, as well as Army Corps of Engineers authorization, and Erosion and Sedimentation control approval from the York County Conservation District.

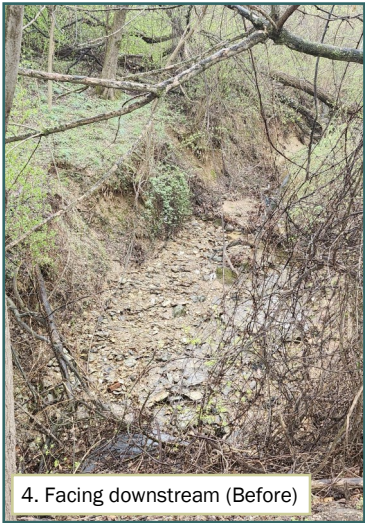
Aquatic Resource Restoration Company (ARRC) was the winning bid for construction. Their work commenced in April 2025, and was completed June 2025. The Township’s contract with ARRC included construction activities, as well as providing as-built and 5-year monitoring and inspection of the project.



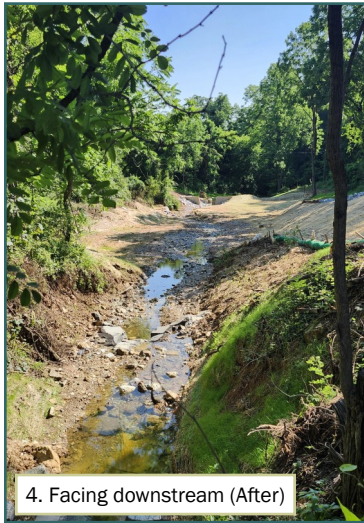
3. Facing upstream (Before)



3. Facing upstream (After)



4. Facing downstream (Before)



4. Facing downstream (After)

FUNDING:

The total cost of the project was \$709,750.66. See the breakdown below:

DESIGN COST = \$75,143.46	
York County Community Foundation	\$10,000
PA DEP Growing Greener Grant	\$39,325
York County Stormwater Consortium	\$25,818
Cost to York Township	\$.46

CONSTRUCTION COST = \$634,607.20	
York County CAP Grant	\$245,500
York County Stormwater Consortium 1 st award 11/17/2021	\$212,920
York County Stormwater Consortium 2 nd award 5/28/2025	\$176,187
Cost to York Township	\$0.20