

WILLIS/WOODCREST/UPPER WEADLEY ROAD STORMWATER MANAGEMENT & DRAINAGE IMPROVEMENT PROJECT

BACKGROUND:

Because of the geography surrounding Willis Lane and Upper Weadley Road, excess runoff during major storms presents a significant flood risk. Runoff from several different roads including Arlyn Circle, Barton Lane, Saunders Drive, Woodcrest converge onto Willis Lane and creates flows that previous infrastructure was unable to handle. This residential area of the Township was built prior to modern stormwater management techniques, and some of the existing infrastructure was near or past its intended design life. Rain is becoming more frequent and intense with time, as is flooding, and the naturally steep terrain of this area generates high flow rates of water runoff which pick up and carry significant amounts of sediment and debris.



PROJECT DESIGN:

To comprehensively address the stormwater issues of the area, multiple improvements were planned for implementation:

- Installation of a new Underground Stormwater Infiltration Bed along with new Stormwater Drainage Inlets (4) and Piping (> 32-LF) on Arlyn Circle
- Addition of new Stormwater Drainage Inlets (>10) and Pipes (> 570-LF) on Upper Weadley Rd & Willis Ln
- A new Aboveground Vegetated Stormwater Detention Basin on Willis Ln, along with new vegetation installation (deciduous and evergreen trees, etc.), fencing and access driveway.
- Relining of approx. 212-LF of existing partially deteriorated CMP Stormwater Piping on Willis Lane.
- Relining of approx. 1,920-LF of existing Sanitary Sewer lines in vicinity of Willis Lane.
- Relocation of approx. 200-LF of existing Sanitary Sewer lines in vicinity of Upper Weadley Road, along with installation of two (2) new manholes.
- Relocation of section of existing AQUA waterline by AQUA on Arlyn Circle.



TIMELINE:

Stormwater development plans were developed by consulting firm Princeton-Hydro in 2023-2024. Preliminary Stormwater designs were completed in October 2024, and Final Plans were completed in the spring of 2025. Bidding for the project opened in Summer 2025, and was awarded to N. Abbonizio Contractors, LLC. A phased construction timeline broke ground in mid-August and has progressed on schedule.

Nearing the end of 2025, Storm Inlet Boxes, Manhole Structures, and Storm Drainage Pipes were installed throughout Willis, and Upper Weadley roads, as well as Arlyn Circle.

Work on the underground infiltration bed for Arlyn Circle was completed in March 2026. Improvements to existing piping were continued, as well as construction the Aboveground Stormwater Basin and foundation wall on Willis Lane. Excavated infrastructure, such as roadways, were also temporarily restored. The Stormwater Aboveground Basin installation was completed in May 2026, and is planned to be seeded and stabilized, along with installation of fencing and trees replacements in June 2026. The final access driveway, roadway/property restoration and paving will occur in July. Project will be completed on/or before the September 30, 2026 H2O PA Grant deadline.

PARTNERS:

- **Tredyffrin Township** - Project Manager/ Township Engineer - Stephen Burgo, P.E
- **PA DCED** - H2O PA Grant (> \$1.9 M Funding for this project)
- **AQUA** - Waterline Utility Relocation on Arlyn Circle
- **N. Abbonizio Contractors, LLC** - Project Construction Contractor
- **Princeton-Hydro** - Designer - Stephen Duda, P.E., Clay Emerson, P.E., PhD, & Sean Walsh, P.E. - Stormwater AG Basin, UG Infiltration Bed, and SW Drainage System design/planning & hydrologic modeling



COST/FUNDING SUMMARY:

<p>Over half of funding for this project is from part of a \$2.2M H2O PA Grant from the PA Dept of Community and Economic Development (DCED). Remaining funding comes from Tredyffrin Twp, and the breakdown of expenses & funds for this project is shown on the right. The project is expected to finish on time and under budget.</p> <p><i>*Sanity Sewer work listed was funded by the Sewer Utility Fund, including the design/inspection services which weren't included.</i></p>		Provider of		
	Expense or Fund	Service	Amount	% of total
	Total Project Costs		\$3,670,351.25	100%
	Design Services	Princeton Hydro	\$360,300.00	9.82%
	Original Contract	Princeton Hydro	\$221,400.00	6.03%
	Supplemental Design Services Contract	Princeton Hydro	\$138,900.00	3.78%
	Construction / Construction Inspection (CI)		\$3,310,051.25	90.18%
	CI Contract (not to exceed)	Princeton Hydro	\$331,000.00	9.02%
	Stormwater	N. Abbonizio	\$2,979,051.25	81.17%
	Sanitary Sewer	N. Abbonizio	\$298,419.00	(*)
	Funding Sources		\$3,670,351.25	100.00%
	PA DCED Grant		\$1,886,850.00	51.41%
			\$1,783,501.25	
	Tredyffrin Township			48.59%

BENEFITS AND RESULTS:

This new infrastructure will capture & control runoff during future rainfall events. Additions near Willis Ln reduce peak flow rates during heavy rains and manage runoff release from storage in the new basin. The infiltration bed added beneath Arlyn Circle will allow captured water runoff to infiltrate into the ground, rather than flow overland and potentially damage nearby properties. These systems will further reduce runoff into the tributary of Trout Creek on Upper Weadley Rd, and improve conditions further downstream on Pugh Road, etc. the Trout Creek Watershed.

