DEP GROWING GREENER

West Branch Codorus Creek Restoration

Project # 201807131451

Project Description - Prior to construction, West Branch Codorus Creek and its unnamed tributary were exhibiting signs of bed and bank erosion. West Branch Codorus Creek was subject to vertical, bare, and unstable banks, and an absence of meandering due to lack of floodplain connection. This degradation was likely due to historic straightening of the channel leading to an entrenched channel. The goals of the restoration were to provide water quality improvements within the Lower Susquehanna watershed through increased habitat availability and diversity, increased floodplain connectivity, and improved channel stability along this reach. The implementation of design strategies will achieve the reduction and removal of sediment, nitrogen, phosphorus, and other pollutants. These goals were met through increased sediment residence time within the project reach, natural meandering of the channel, and gently sloped banks allowing water connectivity to the floodplain.

Project Timeframe – December 31, 2020 through December 31, 2022

Pictures –

Project Results - The restoration design called for realignment of approximately 924 linear feet of stream channel to a more resilient pattern and profile, installation of in-stream woody structures such as toewood to provide habitat and roughness, bank grading to reconnect the stream to the floodplain, and robust planting. In-stream woody structures, such as toewood, were installed to provide valuable habitat, shade, and variability. Toewood provides additional roughness and stream bank stability along meander bends. Bioengineering practices included coir fiber matting to provide bank stability as vegetation establishes and bank grading to reduce near bank stresses and reduce erosion. Live stakes and tublings accompany toewood structures and riffles to provide additional stability, shade, and improved aquatic habitat. Reconnecting the stream to the floodplain creates an active floodplain, acting as a sink for sediment and nutrients collected in runoff as the energy is spread across the floodplain. Post-construction, this project restored approximately 898 linear feet of perennial stream.

Project Costs - $509,395.00 of Growing Greener, $77,438.94 of match

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