

The Natural Flow of Cooperation

A Water Management Success Story

An unsightly and degraded urban stream adjacent to Winston-Salem State University and Civitan Park was more than just an eyesore. A jumble of fallen trees and urban trash restricted the flow of Salem Creek as it ran awkwardly beside the city's premiere bicycle and pedestrian trail. Erosion of the stream's banks also threatened an adjacent parking lot and made a pedestrian bridge unstable and unusable.

The municipal government and the university's leaders approached Pilot View RC&D for help in addressing the water management challenges they faced. Pilot View RC&D saw the opportunity to expand the project to produce additional resource management benefits.

The project restored 5,240 linear feet of Salem Creek and its tributaries to a stable condition, enhanced its aesthetics, and improved its ecological and water quality functions. The restoration involved lowering the banks for flood relief and grading the banks to a more stable angle. It also involved reestablishing a natural meander to reduce erosion's threat against the parking lot. The project employed soil lifts, boulder and log grade control, and flow diversion structures to stabilize and protect the reconstructed streambed and banks. The project removed a rubble landfill and created 5.7 acres of floodplain wetlands and 17 acres of riparian meadow and forest habitat. Two half-acre stormwater wetland basins were constructed to provide water quality treatment for highly urbanized subwatersheds. A new pedestrian footbridge, asphalt walk and bikeway, as well as a wetland loop trail system were installed to improve public access.



Salem Creek was clogged with debris and its banks eroding.



The original alignment of Salem Creek is seen after the trees were removed.



Salem Creek was realigned with engineered meanders and wetlands.

Pilot View RC&D took on the management of the project and secured state funding through the participation of the North Carolina Division of Water Resources and the Clean Water

Management Trust Fund. With additional funding provided by Winston-Salem State University and the City of Winston-Salem, Pilot View RC&D raised \$2.2 million. Pilot View RC&D selected Clear Creeks Consulting to design the project.

North State Environmental won the construction contract. (This project was noted as a contributing factor to North State Environmental receiving national recognition in 2006 as *Equipment World* magazine's Contractor of the Year.) The project has become a model for

restoring urban streams and creating wetlands for stormwater management.

The project was funded at \$2.2 million, all raised by Pilot View RC&D.

The total project value was \$2.2 million.

The project's five partners were Pilot View RC&D, NC Division of Water

Resources, Clean Water Management Trust Fund, City of Winston-Salem, and Winston-Salem State University.

For information, contact: Charles Anderson, Pilot View RC&D, 2714 Henning Drive Winston-Salem, NC 27106. canderson@pilotviewRCD.org 336-750-0522.



North State Environmental constructed the design by Clear Creek Engineering.



Through restoration efforts, Salem Creek again became a functioning urban stream.