

Innovative Technology for Stormwater Treatment

Compressed Media Filter and UV Disinfection Facility



CASE STUDY

Columbus, GA

Weracoba Creek Stormwater Treatment

10 MGD Filter Capacity
2 MGD UV Capacity
Operation Since 2007

Protect and Improve

The Columbus Water Works of Columbus, GA, implemented a stormwater treatment system to protect the downstream public health and improve aquatic biology in the city's Premier Park. This facility was funded by a \$0.9 million EPA 319(h) grant to evaluate treatment of urban stormwater runoff.

The USEPA and the Georgia EPD have declared this project a success story under the 319 Grant Program. The project also received the "Build America" and "Build Georgia" awards in 2008. The project was tested by the University of Georgia, Columbus State University, and the University of South Florida.

FlexFilter™ Compressible Media Filter

The WWETCO FlexFilter™ technology uses the influent water column to compress a flexible membrane that provides a compression gradient through the media bed. This allows

the stratification and removal of both large and small particles. A 3-ft differential head is formed in the creek during stormwater runoff using the WWETCO FlexFlow™ Control Valve.

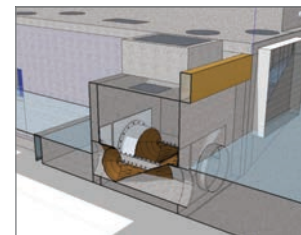
FlexFlow™ Control Valve

The FlexFlow™ Control Valve technology was commercialized under a USEPA Small Business Innovation Research Grant. The technology allows aquatic biology passage during dry weather flow and causes the head differential needed to operate the filter during wet-weather flow.

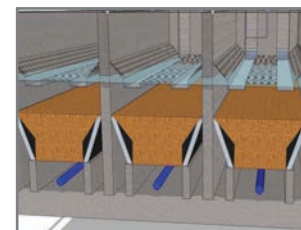
Process Path

The process path of the treatment system includes flow attenuation, 0.5-inch coarse screening, 10 MGD WWETCO compressed media filtration and 2 MGD UV disinfection. Influent solids range from more than 300 mg/L down to less than 100 mg/L total suspended solids (TSS). The effluent from the filter was between 5 and 15 mg/L. The Weracoba Creek Stormwater Treatment System was found to significantly improve water quality, meeting total maximum daily load (TMDL) requirements for fecal coliform and macro-invertebrates.

The project received the "Build America" and "Build Georgia" awards in 2008 from the Associated General Contractors of America.



FlexFlow™ Valve



FlexFilter™ Internals