

ENVIRONMENTAL

Pennypack Creek Watershed, Pennsylvania

For almost three decades, Pennsylvania's Pennypack Creek Watershed has witnessed steady urbanization resulting in increased pollution, threatened water quality and weakened sustainability in the region. As a result, two of the state's major universities — Temple and Villanova — have combined to form a larger, more powerful stormwater initiative to implement and study the effects of stormwater best management practices (BMPs). CULTEC's subsurface infiltration systems are an integral part of this initiative.



The Temple-Villanova Sustainable Stormwater Initiative (T-VSSI) will test the effectiveness of a CULTEC subsurface infiltration system consisting of 25 Recharger[®] 330 HD heavy-duty chambers, CULTEC's HVLV 180 Header System, and one Stormfilter[™] 400 Water Quality Filtration Chamber. The entire system will have the capacity to store and infiltrate more than 10,000 gallons of stormwater runoff. In addition to the infiltration gallery, the empirical study will test a number of other BMPs including wetlands, ponds and riparian buffers and use the findings to develop improved stormwater management planning and techniques for Southeastern Pennsylvania.

The Pennypack Creek Watershed covers 56-square-miles over 12 municipalities and includes of population of more than 300,000 people. The watershed covers parts of Montgomery and Bucks counties and the city of Philadelphia and is almost completely built-up leading to a number of

problems, including increased flooding, increased levels of silt in the rivers and other ecological degradation. The key issues in this area are unplanned land development, poor stormwater management, impaired water quality and outdated floodplain maps.

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“By studying the CULTEC system installed at the site, we will be able to effectively show how municipalities can retrofit existing facilities where stormwater management is lacking,” said Richard Nalbandian, Research Fellow from the Temple University Center for Sustainable Communities. “Furthermore, we can recommend these types of underground systems as solutions in future situations where land constraints may limit BMP possibilities.”

CULTEC chambers may be used as replacements for large diameter pipe and stone systems and retention/detention ponds for subsurface management of stormwater. CULTEC provides a complete stormwater management plan consisting of filtration, conveyance, storage and infiltration within its own product line. By utilizing the components of an entire CULTEC system, regulations of the EPA’s Phase II of the Clean Water Act can be met.

“As part of the stormwater management industry, we believe our involvement in this study is important not only to alleviate immediate concerns of the watershed but to also provide insight into the future,” said Robert DiTullio, Founder and CEO of CULTEC, Inc. “CULTEC is proud to be able to be part of this initiative and will do whatever we can to help the enthusiastic and dedicated researchers of the Temple-Villanova partnership.”



Recharger 330 HD

With a capacity of over 400 gallons, CULTEC’s Recharger 330 HD is one of the largest chambers available. Because of its size, the chamber can help save land space and offer design flexibility. CULTEC’s polyethylene chambers are durable, yet lightweight and can be installed easily by one or two workers to save time and labor costs. These advantages make CULTEC chambers an efficient and cost-effective alternative to above-ground options such as ponds or swales, as well as underground stone and concrete pipe systems.

CULTEC Recharger 150, 180 and 280 and V8 models are also available for flexibility in design and on sites with size and/or depth constraints. CULTEC chambers, headers and stormwater filter systems are used in a variety of municipal, commercial, retail, residential and industrial applications. CULTEC stormwater systems comply with federally mandated Clean Water Act guidelines, and utilize patented interlocking ribs and fully-formed endwalls to achieve long-life and durability.

