

**Title:** Fundamentals of Green Infrastructure – Lessons from the 319 Monitoring Program

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**Description:**

This workshop discussion will focus on the fundamentals of green stormwater infrastructure. This translates into practical design, construction, and monitoring / maintenance lessons learned obtained during the course of 319 monitoring program research. The foundations of this workshop have been developed for use in the Philadelphia area, but translate well.

Stormwater Management has changed dramatically in the last decade, as it has moved away from a flood control perspective toward sustainability of our rivers and watersheds. The green infrastructure tools that we use are well established, but still relatively new, and we are rapidly learning more on how they work, their capabilities, and how to build to protect our waters.

New design practices and innovative technologies are being explored that address runoff volume, temperature, and quality. Many of these BMPs have been constructed and are under study at Villanova University as part of the 319 Monitoring program. Those involved with researching the performance of these sites have the unique opportunity to follow the site from design, through construction, and then to operation, and to contrast the performance of the site with others. Many of the experiences or lessons learned are not found in scientific journals, but are relevant to getting the maximum benefit from these sites. Further information on these research sites is available at [www.villanova.edu\VUSP](http://www.villanova.edu\VUSP).

Many of our guidance documents, are still based on either flood control or the first pass at design guidance. What I will endeavor to do is to stress the fundamentals, and to focus on the why's, based upon research data.