



Laboratory for

LID

A firm's headquarters employs multiple low-impact development techniques.

By Jay Landers

When Wetland Studies and Solutions Inc. (WSSI) decided to construct its new headquarters in Gainesville, VA, there was no question that the building and site would be developed in a manner that sought to limit untoward environmental effects, especially on an adjoining wetland and stream system. After all, the company—a consulting firm that specializes in water, natural, and cultural resources—is dedicated to fashioning ecologically responsible development. Ultimately, WSSI opted to showcase an array of low-impact development (LID) techniques for managing stormwater and environmentally friendly design and construction practices. The result is a veritable LID “laboratory” that the company hopes will contribute to the scientific understanding of stormwater management and inspire others to adopt similar approaches.

The various LID techniques employed on WSSI's 5-acre site are as ambitious as they are unnecessary. Because the property is served by an existing stormwater management pond, the company was not required to implement anything more than a traditional curb-and-gutter approach to managing stormwater. So why did WSSI choose to go beyond what was required of it? “Because it's the right thing to do,” says Michael Rolband, the firm's president. “Stormwater runoff in northern Virginia is typically controlled by stormwater ponds that regulate only peak flows. Over the past 15 years, we've seen significant stream degradation in channels above regional stormwater management ponds due to lack of any control, and almost as severe erosion in stream channels below stormwater management ponds due to the change in timing and the increase in volume of stormwater runoff from conventionally designed stormwater management systems.”

In terms of stormwater management at WSSI's headquarters, the “right thing to do” involved incorporating three different types of pervious pavement in the parking lot; constructing such features as a green roof, rain garden, underground cistern, water-quality swale, and gravel bed detention system to collect and filter runoff; and taking steps to avoid disturbing as much of the site as possible. Furthermore, extensive measures were taken during construction to control erosion and protect downstream resources from sediment.