SOIL AND VEGETATION WEB

SUSTAINABLE SITES INITIATIVE: 2012 UPDATE

Voluntary national guidelines and rating system for landscapes raise the bar on rebuilding America's green infrastructure from the ground up.

David McDonald and Danielle Pieranunzi

Pilot projects are testing the SITES™ guidelines. The Novus Corporation Headquarters Campus in Missouri was one of three pilots to be certified recently. Features include a detention basin that captures storm water and provides aquatic habitat and a scenic view from a pavilion topped with a vegetated roof.

THE Sustainable Sites Initiative™ or SITES™ (www.sustainablesites.org) is an interdisciplinary endeavor to create voluntary national guidelines and a rating system for sustainable land design, construction and maintenance practices for landscapes of all types, with or without buildings. The initiative is led by the Lady Bird Johnson Wildflower Center, the American Society of Landscape Architects and the U.S. Botanic Garden (see "Performance Guidelines for Sustainable Sites," December 2009, for background). The SITES guidelines aim to restore and enhance our urban "green infrastructure" — the web of soil and vegetation that manage storm water, clean and supply our water and air, conserve energy, recycle organic wastes and create livable towns and cities.

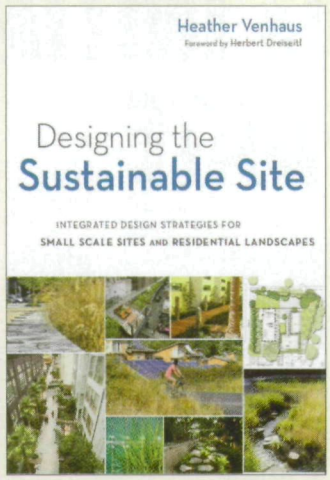
SITES is modeled on the US Green Building Council's LEED™ green building rating system. The SITES guidelines and rating system measure performance of a site or landscape, from predesign site assessment all the way through design, site preparation, construction, and into operations and maintenance. Farmland and wetland preservation, storm water, water conservation, air quality, climate protection, soil, vegetation, habitat and community are all addressed by SITES using an ecosystem services framework. Ecosystem services are natural functions that benefit humans, and so are related to all three components that define sustainability: social equity, ecosystem stewardship and life cycle economic cost and benefits.

SOIL AND ORGANICS RECYCLING

Soil and organics recycling are the foundation of a sustainable site. The SITES rating system includes: Preserving farmland and environmentally sensitive soils and vegetation; Establishing Vegetation and Soil Protection Zones to limit construction impact; Creating a Soil Management Plan that delineates how soil will be protected or restored; Restoring construction-impacted soil areas by decompacting and restoring organic matter (mature, stable compost is rec-

DESIGNING THE SUSTAINABLE SITE

DESIGNING the Sustainable Site: Integrating Design Strategies for Small Scale Sites and Residential Landscapes by Heather Venhaus (John Wiley & Sons, 2012) was written to help landscape practitioners integrate living and built systems into mutually beneficial and cohesive projects that value ecosystem services. The book draws from Venhaus's role as project manager, from 2005-2009, in developing the Sustainable Sites Initiative (SITES) Guidelines and Performance Benchmarks (see accompanying article).



New book outlines the integrated design process and illustrates how sustainable design is relevant to projects of any size or budget.

Humankind benefits from a multitude of resources and processes provided by natural systems. Collectively, these benefits are known as ecosystem services and include products such as climate regulation, habitat, soil formation, waste decomposition, nutrient dispersal and recycling, pollination, and other necessities such as clean air and water. Venhaus asserts that all sites — whether densely urban, suburban or rural — can support the natural systems and processes that sustain and fulfill life. When sites protect and restore ecosystem services — and when buildings and landscapes are designed to work together, rather than the latter being an afterthought — projects may achieve a broader range of environmental, economic and social benefits. In purely economic terms, Venhaus cites scientists' estimates that these services provide the monetary value of, on average, about $33 trillion per year. "Sustainable sites seek to improve the quality of life of site users and the surrounding communities by creating regenerative systems that protect and restore ecosystem services," explains Venhaus.

She suggests that landscape practitioners have the opportunity to take the green building movement to the next level of sustainable design by helping project teams understand the value of integrating living systems into all aspects of site design. Throughout the book, Venhaus illustrates how sustainable sites can help society build an environmental ethic by providing everyday opportunities for people to connect with nature. And she emphasizes that decisions must be based "not only on their economic merits but also on their environmental costs and benefits." She advocates for the sustainable redevelopment of previously developed sites that may have limited ecological or cultural value such as greyfield or brownfield sites because they provide a mechanism not only for protecting native ecosystems and agricultural lands (via diversion of development pressure) but also for restoring natural systems and the ecosystem services they provide. Conversely, Venhaus states, "greenfield development that diminishes ecosystem services ultimately contributes to the global decline of natural capital and the overall benefits humanity receives from nature."

Designing the Sustainable Site includes a multitude of success stories that are at once beautiful and instructive, case studies that inform and inspire, a laundry list of what makes a site sustainable, treatises on the critical importance of education, and site monitoring and adaptive management. The book outlines the integrated design process and illustrates how sustainable design is relevant to projects of any size or budget. The full color design guide will assist project teams in fulfilling credit requirements of green building assessment tools such as LEED, BREAM or SITES. To learn more, visit www.designingthesustainablesite.com. — D.S.

ommended); and Planning for long-term site operations that include organics recycling and reuse.

Just as the LEED™ rating system has transformed building in America, the SITES guidelines and rating system is poised to affect site and landscape development and become a new standard of design practice, even for projects that don't pursue certification. After years of work by technical experts around the US, thousand of public comments, and nearly two years of testing with 155 pilot projects, the SITES rating system plans to be complete and open for guiding and certifying projects in early 2013.

Last October, the federal government issued SITES-based recommendations. The White House Council on Environmental Quality released Guidance for Federal Agencies on Sustainable Practices for Designed Landscapes to help agencies meet their goals under Executive Order 13514, which directs federal agencies in sustainable practices. The U.S. Botanic Garden led a federal working group to produce the 32-page guidance on Sustainable Practices for Built Landscapes — basing it on the SITES guidelines and performance benchmarks for sustainable land design, construction and maintenance practices. The new federal guidance pertains to the built environment outside of a building's walls. Like the SITES, the federal guidance recommends ways to create more sustainable landscapes by focusing on specifics like healthy soil, native vegetation or hydrology. Many cities and businesses are now looking at how they can use SITES too.

More information about the SITES rating system is available in The Sustainable Sites Initiative: Guidelines and Performance Benchmarks at www.sustainablesites.org/report. To learn more about restoring urban green infrastructure, see: "How to Make Organics Recycling 'Business As Usual'," (March 2011). For the soil protection and restoration best practices that SITES is built on, see "Don't Treat Building Soil Like Dirt" (March 2008) and other articles available by searching the *BioCycle* archives under "Soils for Salmon." ■

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