

ASLA Sustainability Initiatives:

- Sustainability Resource Guides
- Demonstration Green Roof
- Sustainable Sites Initiative™



Professional Practice

SUSTAINABLE DESIGN RESOURCE GUIDES AND TOOLKITS



Climate Change

Left unchecked, the increase in the Earth's temperature is expected to have devastating effects. Global warming is expected to cause melting ice shelves and rising coastal waters; the spread of airborne diseases; extensive species extinction; drought and wildfires, mass human, animal and plant migrations; and wars over shrinking amounts of potable water. According to the IPCC, the projected sea level rise could reach 19-23 inches by the year 2100. There are a range of landscape architecture-related mitigation strategies that, if employed at mass scale, can help reduce GHG emissions. [Explore resources.](#)



Green Infrastructure

Green infrastructure can be considered a conceptual framework for understanding the "valuable services nature provides the human environment." At the national or regional level, interconnected networks of park systems and wildlife corridors preserve ecological function and create a balance between built and natural environments. At the urban level, parks and urban forestry are central to reducing energy usage costs and creating clean, temperate air. Lastly, green roofs, walls, and other techniques within or on buildings bring a range of benefits, including reduced energy consumption and dramatically decreased stormwater runoff. [Explore resources.](#)



Livable Communities

Communities are more livable when they respect ecological and cultural systems, promote economic development, strive for social equity, and provide places for positive social interaction. While planning for growth and change, all communities should aim

PROFESSIONAL PRACTICE

- Resource Center
- > Resource Guides and Toolkit
- Professional Practice Networks
- Licensure
- Professional Links
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www.asla.org/sustainability

Professional Practice

SUSTAINABLE TRANSPORTATION



Image credit: Inhabitat

Transportation corridors and facilities are major components of the nation's landscape and public realm. Integrating comprehensive transportation planning with natural systems analysis and land use planning is essential for creating livable communities in sustainable environments.

The alignment, scale, and character of our thoroughfares play an integral role in determining urban form, development patterns, and a sense of place. Streets and highways should enhance interconnected transportation options, particularly for pedestrians, bicyclists, transit riders, and people with disabilities. All multi-modal transportation systems should be safe, efficient, convenient, and beautiful.

U.S. Organizations

Context Sensitive Solutions

[Institute for Transportation and Development Policy](#)

[Livable Streets Initiative](#)

[National Complete Streets Coalition](#)

[Reconnecting America, Center for Transit-Oriented Development](#)
[Surface Transportation Policy Partnership](#)

[Transportation for America](#)

[U.C. Davis Sustainable Transportation Center](#)

International Organizations

[Centre for Sustainable Transportation](#)

Other Resource Guides in this Series:

[Green Infrastructure](#)

[Livable Communities](#)

[Sustainable Urban Development](#)

[Climate Change](#)

- Targeted to landscape architects and local policy makers
- Issue analysis
- Key organization links
- Research studies
- Government resources
- Case studies



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Professional Practice

SUSTAINABLE RESIDENTIAL DESIGN: INCREASING ENERGY EFFICIENCY



High Point, Seattle, Washington. Mithun. Juan Hernandez / Mithun

Integrated site design is a framework for increasing the quality of the built environment, and involves *maximizing existing natural systems to minimize energy usage*. These types of designs leverage the many benefits of natural systems, thereby significantly cutting down external energy use. Decreased energy usage also means homes are more resilient to shifts in the availability of energy and climate change.

Homeowners can use sustainable landscape architecture practice to reduce energy usage. As an example, residential green roof systems, which are often key features of integrated site design projects, can significantly reduce home heating and cooling costs. The energy efficiency benefits of sustainable landscape architecture practices, including age-old practices like tree siting for shading, can be further leveraged through the use of clean energy technologies, like solar power. Additionally, sustainable residential landscape architecture practices help reduce the rate of GHG emission growth. These types of sustainable residential solutions, if scaled up, can mitigate residential building and transportation-related emissions.

State and local governments are working with design professionals to incorporate sustainable residential landscape architecture practices into homes throughout urban, suburban and rural areas.

Inefficient home energy use is not only costly, but also contributes to the growth of greenhouse gas (GHG) emissions, the major cause of climate change. Residential and commercial buildings use ten percent of U.S. energy. According to Architecture 2030, building construction and operations-related energy use accounts for almost 50 percent of total GHG emissions.

Through "integrated site design," a comprehensive approach to sustainable building and site design, sustainable residential landscape architecture practices can not only improve the environment, but also increase energy efficiency. If part of a broader integrated site design, sustainable residential landscape architecture can dramatically reduce energy costs over the long term while creating a healthy residential environment.

- Targeted for homeowners, residential designers, local zoning boards
- Water efficiency
- Energy efficiency
- Maximizing plant benefits
- Low-impact materials



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Sustainability Toolkit



Economic Models

Sustainability Toolkit: Economic Models focuses on economic sustainability, which involves the development of a healthy economy that supports and sustains people and the environment over the long-term. In a market-driven economy, cost is a deciding factor in determining whether a project moves forward. To be sustainable, projects must not only provide environmental and social benefits, but also offer economic value. Ecosystem service models can also be used to quantify the inherent economic value of services nature already provides for free. [Explore resources.](#)



Environmental Models

Sustainability Toolkit: Environmental Models focuses on the environmental side of sustainability, perhaps the crucial component in sustainable projects for the built environment. The toolkit is arranged from macro- to micro-scales, beginning with sustainable regional planning, and moving to sustainable cities & communities planning, sustainable neighborhood planning, and, then finally, site-specific tools related to sustainable landscapes and green buildings. [Explore resources.](#)



Social Models

"Sustainability Toolkit: Social Models" focuses on social sustainability, which involves the development of resilient communities that meet residents' health and social needs over the long-term. In a socially-sustainable community, residents are empowered; have equal access to green, healthy spaces; can choose among multiple transportation options; and enjoy a high quality of life. At all scales, public participation is crucial for ensuring planners and designers keep existing communities in mind and create social value for all citizens. [Explore resources.](#)

- Economic, social, environmental models
- Online toolkits
- Assessment tools
- Modeling software
- Checklists
- Case studies





DESIGNING OUR FUTURE: SUSTAINABLE LANDSCAPES

View Case Studies →

20 case studies illustrate the transformative effects of sustainable landscape design.



Animations

Watch animations created with Google Sketchup to learn how sustainable design works.

Watch →



What are Sustainable Landscapes?

Learn More →

www.asla.org/sustainablelandscapes

- Targeted to general public
- Case studies to illustrates landscape sustainability
- Defines and explain environmental benefits
- Includes sustainability education resources



DESIGNING OUR FUTURE: SUSTAINABLE LANDSCAPES

PROJECT TYPE

- Urban
- Park
- Waterfront
- Beach
- Brownfield

ENVIRONMENTAL BENEFITS

- Creates Habitat for Wildlife
- Ecologically Manages Stormwater
- Restores Soils
- Salvages Materials

Download Fact Sheet (PDF)

RELATED ANIMATIONS

From Industrial Wasteland to Community Park

Leveraging the Landscape to Manage Water

HtO Park

Toronto, Ontario, Canada



During the 1800s, Toronto's waterfront was the site of intensive industrial development because its location provided convenient shipping access to Lake Ontario. As the city population grew, real estate values in the downtown area skyrocketed. Factories gradually relocated to cheaper land, leaving behind a graveyard of abandoned and polluted industrial buildings.

ASLA Honor Award Recipient, HtO Park by Janet Rosenberg + Associates (JRA), Claude Cormier Architectes Paysagistes, and Herini Pontarini Architects (Photo: JRA/Claude Cormier Architectes Paysagistes)

Photo 1 of 8

Project Facts

- Completed in June 2007, Park HtO is a six-acre public beach and gathering place located on Toronto's Lake Ontario waterfront.
- A portion of the park extends over Lake Ontario to increase its usable area. As a result, the park's boardwalk sits 10 meters above the lake floor.



DESIGNING OUR FUTURE: SUSTAINABLE LANDSCAPES

ALL ANIMATIONS

From Industrial Wasteland to
Community Park

Sustainability Education Resources

Access videos, games,
curricula, and more. →

RELATED PROJECTS

[Greenburg Sustainable
Comprehensive Plan](#)

[High Line Park](#)

[High Point](#)

[HIO Park](#)

[Kresge Foundation
Headquarters](#)

[Mt. Tabor Middle School
Rain Garden](#)

[NE Siskiyou Green Street](#)



[Nueva School](#)

[Park 20/20: A Cradle to
Cradle Inspired Master Plan](#)

[The Rac Riibhor, Tangha](#)

Leveraging the Landscape to Manage Water



Use the  icon above to adjust the sound. Select the  icon above to watch in full-screen mode.
To **download** video, go to [Vimeo](#) and login.

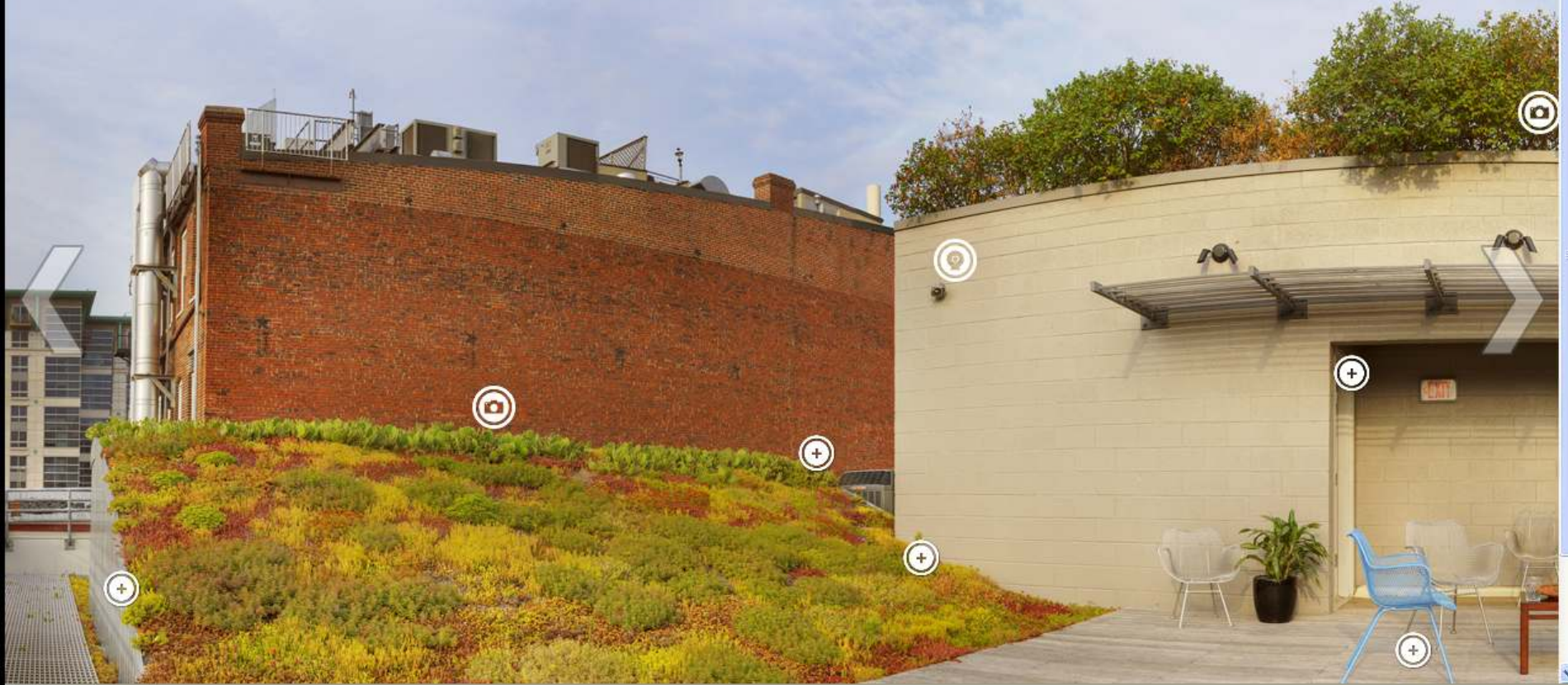
Key Facts:

According to a report from the Sustainable Business Network of Greater Philadelphia, **one inch of rainwater hitting one acre of asphalt over an hour yields 27,000 gallons of water.** In many communities, this water flows into combined stormwater / sewer systems, which channel

Adding in green infrastructure systems is not only good for managing water, but also good for communities. Green infrastructure can lower air temperatures, which is crucial in cities facing the Urban Heat Island effect. Green roofs can double-up as roof-top parks, farms, and natural habitats for

ASLAGREEN ROOF

[Green Roof Central](#) | [Tour the Green Roof](#) | [Green Roof Data](#) | [Contributors and Benefactors](#) | [Student/Teacher Guide](#)



www.asla.org/greenroof



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THE SUSTAINABLE SITES INITIATIVE™

What is SITES™?

- Guidelines and rating system for designed landscapes of all types
- Voluntary
- Interdisciplinary
- Fills the gap in existing green building rating systems



THE SUSTAINABLE SITES INITIATIVE™

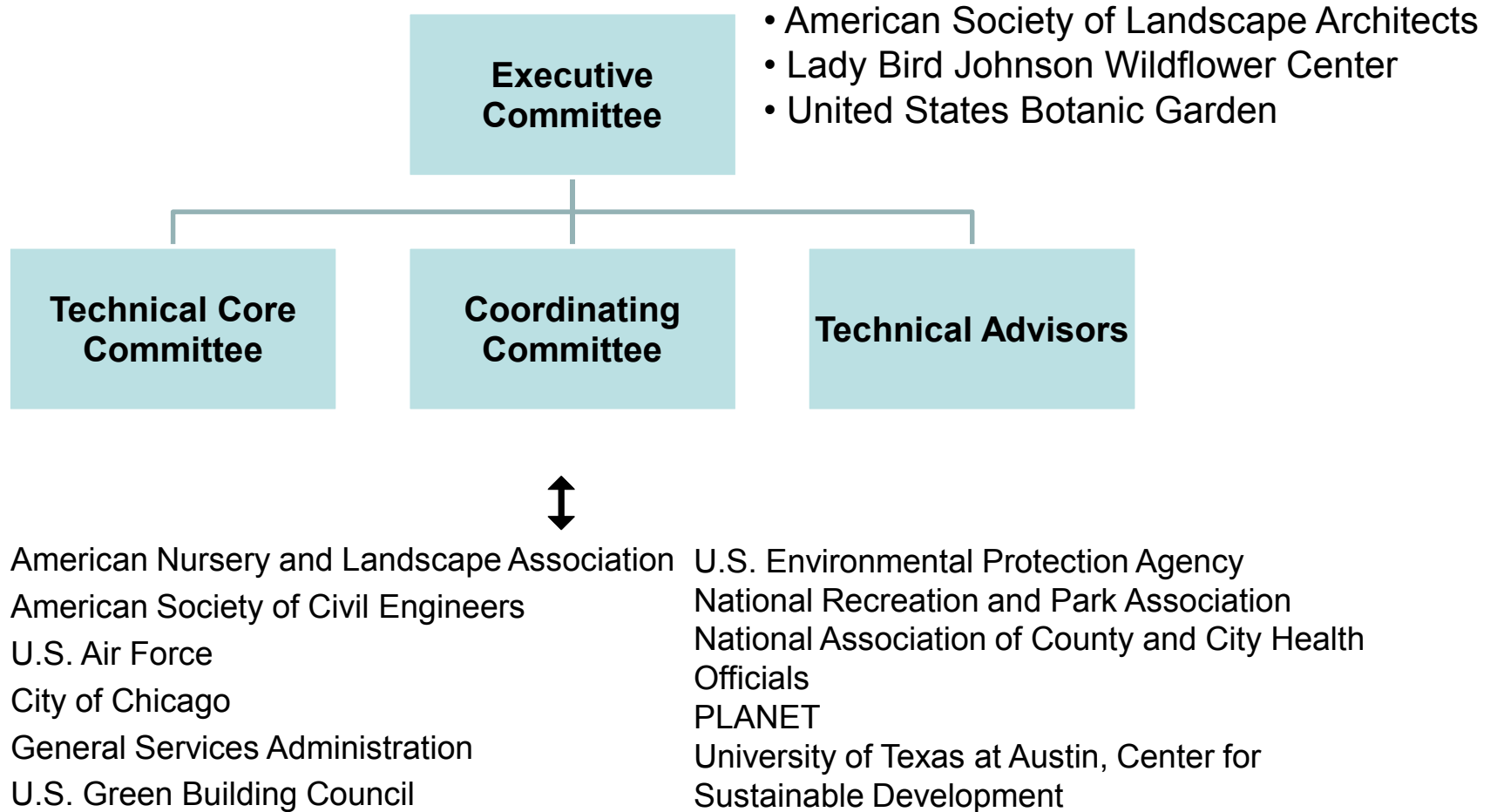
What is SITES?

- Applies to new construction and renovations
- Addresses regional differences
- Applies to sites with and without buildings
- Coordinated with USGBC's LEED ®



Organizational Chart

SITES Pilot Phase 2010-2012

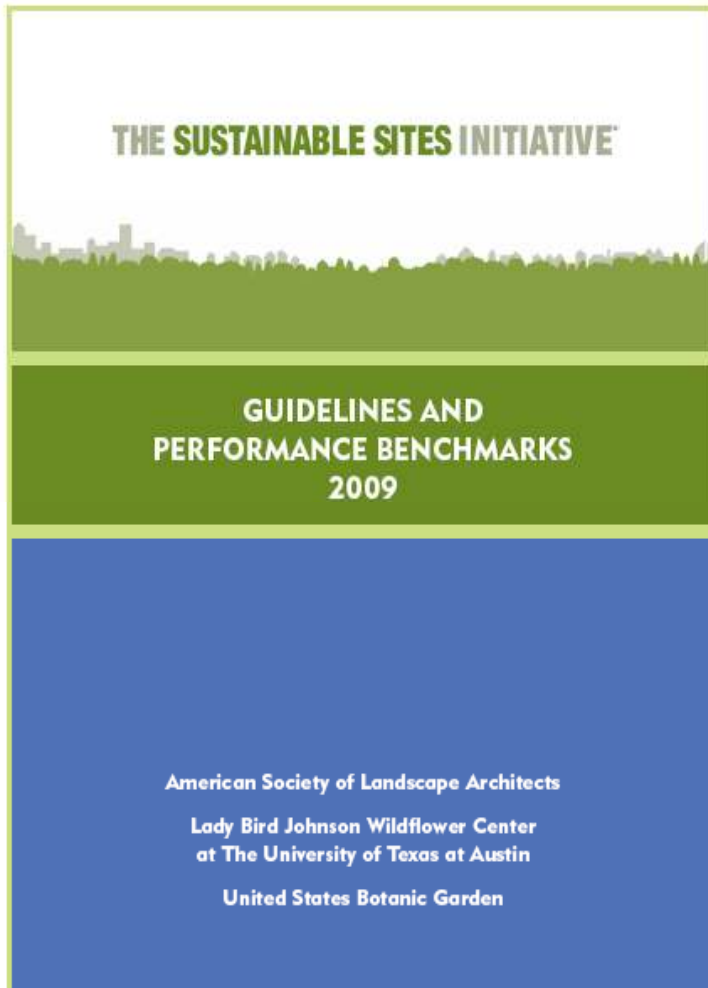


Participating Organizations

- **American Horticultural Society**
- **American Institute of Architects**
- **American Nursery & Landscape Association**
- **American Planning Association**
- **American Public Gardens Association**
- **Association of Professional Landscape Designers**
- **Audubon International**
- **Canadian Nursery and Landscape Association**
- **Canadian Society of Landscape Architects**
- **Council of Educators in Landscape Architecture**
- **Council of Landscape Architectural Registration Boards**
- **Center for Urban Watershed Renewal**
- **Green Roofs for Healthy Cities**
- **Interlocking Concrete Pavement Institute**
- **International Erosion Control Association**
- **Landscape Architecture Foundation**
- **National Building Museum**
- **Professional Grounds Management Society (PGMS)**
- **Rails to Trails Conservancy**
- **Sustainable Buildings Industry Council**
- **Sustainable Urban Forests Coalition**
- **Tree Care Industry Association, Inc.**
- **Urban Land Institute**
- **US Composting Council**

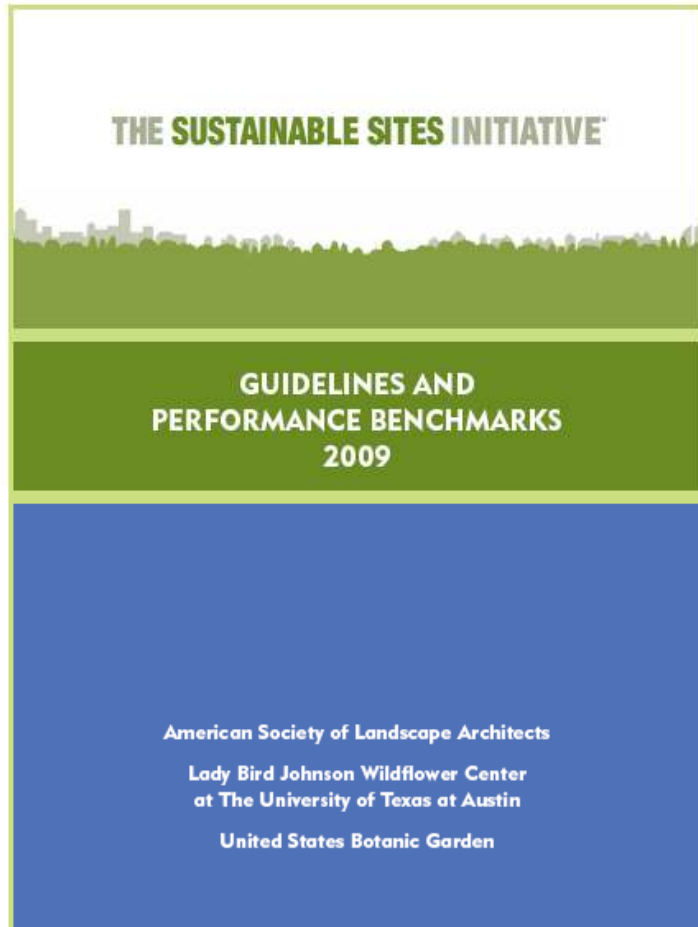


Credit Categories



Site Selection <i>Preserve existing resources and repair damaged systems</i>	21 poss. points
Pre-Design Assessment and Planning <i>Plan for sustainability from the onset of the project</i>	4 poss. points
Site Design – Water <i>Protect and restore site's processes and systems</i>	44 poss. points
Site Design – Soil and Vegetation <i>Protect and restore site's processes and systems</i>	51 poss. points
Site Design – Materials Selection <i>Reuse/recycle and support sustainable production practices</i>	36 poss. points
Site Design – Human Health and Well-Being <i>Build communities and a sense of stewardship</i>	32 poss. points
Construction <i>Minimize effects of construction-related activities</i>	21 poss. points
Operations and Maintenance <i>Maintain the site for long-term sustainability</i>	23 poss. points
Monitoring and Innovation <i>Reward exceptional performance</i>	18 poss. points

Credits and Rating System



- **15 Prerequisites, 51 Credits**
- **Performance-based criteria**
- **250 point scale**
- **4 certification levels**
 - ★ **100 points (40 %)**
 - ★★ **125 points (50%)**
 - ★★★ **150 points (60%)**
 - ★★★★ **200 points (80%)**
- **Multiple point levels offered for flexibility**

SITES Schedule



***Guidelines And Performance
Benchmarks 2009
with Rating System
Released November 5, 2009***

***Pilot Projects Phase
2010 - 2012***

***Open Enrollment for Project
Certification
Target date – 2013***

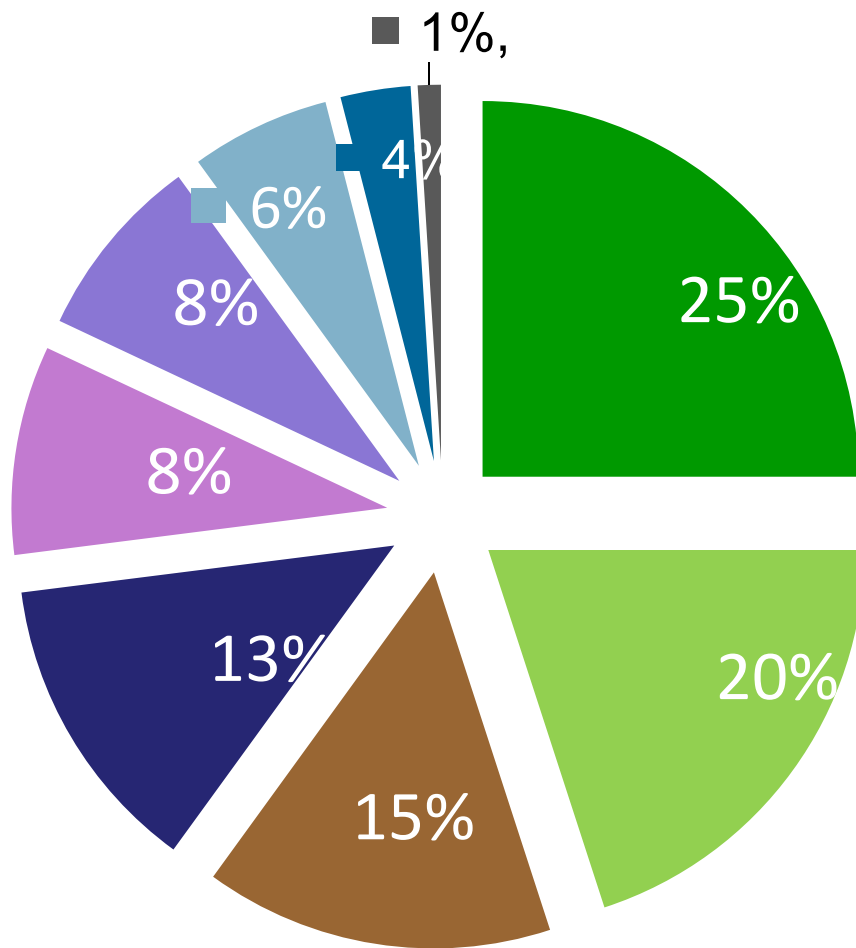


Registered Pilot Projects



- 164 projects are participating in Pilot Program
- From 34 U.S. states as well as Canada, Iceland and Spain
- Information on pilot projects can be found at www.sustainablesites.org/pilot/

Pilot Project Types



- OPEN SPACE-PARK
- INSTITUTIONAL/EDUCATION
- COMMERCIAL
- RESIDENTIAL
- STREETSCAPES/ TRANSPORTATION
- OPEN SPACE-GARDEN/ARBORETUM
- GOVERNMENT COMPLEX
- MIXED-USE
- INDUSTRIAL



SITES Project Certification

**SITES
Certification**

**SITES guidelines
used without
certification**

**SITES
incorporated
in LEED® 2012**

Options for SITES tool

**Goal: Widest Possible Use of SITES Guidelines and Performance
Benchmarks**

THE SUSTAINABLE SITES INITIATIVE™

For more information:

www.sustainablesites.org

or email

lguthrie@asla.org

info@sustainablesites.org

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Wildflowercenter

THE UNIVERSITY OF TEXAS AT AUSTIN



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