

GREEN PRESERVATION

**Maryland - Delaware
American Planning Council
Regional Conference 2008**

Panelists



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Environmental Impact Of Buildings



65% of total U.S. electricity consumption

36% of total U.S. primary energy use

39% of total U.S. greenhouse gas emissions

30% of U.S. waste output: 136 million tons of construction and demolition waste

12% of U.S. potable water use

30% of U.S. raw materials use



What is “Green” Design?

Green Building is the practice of increasing the efficiency with which buildings use resources - **energy, water and materials** - while reducing building impacts on human health and the environment, through better siting, design, construction, operation, maintenance, and removal-the complete building cycle.

Reduced operating costs

Improved public and occupant health

Reduced environmental impacts



Standards and ratings - Voluntary Programs!



Green Building Initiative - GBI

National Association of Home Builders - NAHB
Model Green Home Building Guidelines

U.S. Green Building Council - USGBC

LEED - Leadership in Energy and Environmental
Design

- LEED NC (New Construction)
- LEED EB (Existing Buildings)
- LEED Commercial Interiors, Core & Shell,
Healthcare, Homes, Schools, Retail, &
Manufacturing and Distribution (Pilot)



LEED For Neighborhood Development: LEED-ND 2009

Smart Location & Linkage

- Smart Location
- Proximity & Use of Infrastructure
- Conservation of Natural Resources & Habitat
- Brownfield Redevelopment

Neighborhood Pattern & Design

- Compact, Connected & Open Community
- Diversity of Use & Population
- Reduced Dependence on Auto & Parking:
Walkable & Accessibility to Transit
- Access to Public Space
- Tree Lined Streets (new in 2009)



LEED For Neighborhood Development (Continued)



Green Infrastructure & Buildings (new title for 2009)

- Green Buildings: Siting, Energy, Water, Renewable Energy, etc.
- Adaptive Reuse & Historic Preservation
- Infrastructure: Energy, Recycled Content, Waste Management & Light Pollution

Innovation & Design

- Flexible Credits

Regional Priority Credits

- Flexible Credits



The New LEED-NC! LEED V3



A Reorganization of Previous LEED Products

- Align & Synchronize various LEED Rating Systems
- Promotion of a Continuous LEED Development & Improvement Cycle
- Re-weighting of Points to more accurately reflect Environmental & Human Benefits: New threshold is 40 points out of a 110 point system.
- Implement Regional Bonus Credits

LEED V3 Cont.



LEED for New Construction and Major Renovation 2009 Project Scorecard

Project Name:
Project Address:

Yes	No	Sustainable Sites	26 Points
<input type="checkbox"/>	<input type="checkbox"/>		

Yes	No	Prereq 1 Construction Activity Pollution Prevention	Required
<input type="checkbox"/>	<input type="checkbox"/>	Credit 1 Site Selection	5
<input type="checkbox"/>	<input type="checkbox"/>	Credit 2 Development Density & Community Connectivity	5
<input type="checkbox"/>	<input type="checkbox"/>	Credit 3 Brownfield Redevelopment	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.1 Alternative Transportation, Public Transportation Access	6
<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.2 Alternative Transportation, Bicycle Storage & Changing Rooms	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.3 Alternative Transportation, Low-Emitting & Fuel-Efficient Vehicles	3
<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.4 Alternative Transportation, Parking Capacity	2
<input type="checkbox"/>	<input type="checkbox"/>	Credit 5.1 Site Development, Protect or Restore Habitat	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 5.2 Site Development, Maximize Open Space	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 6.1 Stormwater Design, Quantity Control	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 6.2 Stormwater Design, Quality Control	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 7.1 Heat Island Effect, Non-Roof	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 7.2 Heat Island Effect, Roof	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 8 Light Pollution Reduction	1

Yes	No	Water Efficiency	10 Points
<input type="checkbox"/>	<input type="checkbox"/>		

Yes	No	Prereq 1 Water Use Reduction, 20% Reduction	Required
<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.1 Water Efficient Landscaping, Reduce by 50%	2
<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2 Water Efficient Landscaping, No Potable Use or No Irrigation	2
<input type="checkbox"/>	<input type="checkbox"/>	Credit 2 Innovative Wastewater Technologies	2
<input type="checkbox"/>	<input type="checkbox"/>	Credit 3 Water Use Reduction	2 to 4
<input type="checkbox"/>	<input type="checkbox"/>	30% Reduction	2
<input type="checkbox"/>	<input type="checkbox"/>	35% Reduction	3
<input type="checkbox"/>	<input type="checkbox"/>	40% Reduction	4

Yes	No	Energy & Atmosphere	20 Points
<input type="checkbox"/>	<input type="checkbox"/>		

Yes	No	Prereq 1 Fundamental Commissioning of the Building Energy Systems	Required
<input type="checkbox"/>	<input type="checkbox"/>	Prereq 2 Minimum Energy Performance: 1% New Buildings or 3% Existing Building Renovations	Required
<input type="checkbox"/>	<input type="checkbox"/>	Prereq 3 Fundamental Refrigerant Management	Required
<input type="checkbox"/>	<input type="checkbox"/>	Credit 1 Optimize Energy Performance	1 to 19
<input type="checkbox"/>	<input type="checkbox"/>	12% New Buildings or 8% Existing Building Renovations	1
<input type="checkbox"/>	<input type="checkbox"/>	14% New Buildings or 10% Existing Building Renovations	2
<input type="checkbox"/>	<input type="checkbox"/>	16% New Buildings or 12% Existing Building Renovations	3
<input type="checkbox"/>	<input type="checkbox"/>	18% New Buildings or 14% Existing Building Renovations	4
<input type="checkbox"/>	<input type="checkbox"/>	20% New Buildings or 16% Existing Building Renovations	5
<input type="checkbox"/>	<input type="checkbox"/>	22% New Buildings or 18% Existing Building Renovations	6
<input type="checkbox"/>	<input type="checkbox"/>	24% New Buildings or 20% Existing Building Renovations	7
<input type="checkbox"/>	<input type="checkbox"/>	26% New Buildings or 22% Existing Building Renovations	8
<input type="checkbox"/>	<input type="checkbox"/>	28% New Buildings or 24% Existing Building Renovations	9
<input type="checkbox"/>	<input type="checkbox"/>	30% New Buildings or 26% Existing Building Renovations	10
<input type="checkbox"/>	<input type="checkbox"/>	32% New Buildings or 28% Existing Building Renovations	11
<input type="checkbox"/>	<input type="checkbox"/>	34% New Buildings or 30% Existing Building Renovations	12
<input type="checkbox"/>	<input type="checkbox"/>	36% New Buildings or 32% Existing Building Renovations	13
<input type="checkbox"/>	<input type="checkbox"/>	38% New Buildings or 34% Existing Building Renovations	14
<input type="checkbox"/>	<input type="checkbox"/>	40% New Buildings or 36% Existing Building Renovations	15
<input type="checkbox"/>	<input type="checkbox"/>	42% New Buildings or 38% Existing Building Renovations	16
<input type="checkbox"/>	<input type="checkbox"/>	44% New Buildings or 40% Existing Building Renovations	17
<input type="checkbox"/>	<input type="checkbox"/>	46% New Buildings or 42% Existing Building Renovations	18
<input type="checkbox"/>	<input type="checkbox"/>	48% New Buildings or 44% Existing Building Renovations	19
<input type="checkbox"/>	<input type="checkbox"/>	Credit 2 On-Site Renewable Energy	1 to 7
<input type="checkbox"/>	<input type="checkbox"/>	1% Renewable Energy	1
<input type="checkbox"/>	<input type="checkbox"/>	3% Renewable Energy	2
<input type="checkbox"/>	<input type="checkbox"/>	5% Renewable Energy	3
<input type="checkbox"/>	<input type="checkbox"/>	7% Renewable Energy	4
<input type="checkbox"/>	<input type="checkbox"/>	9% Renewable Energy	5
<input type="checkbox"/>	<input type="checkbox"/>	11% Renewable Energy	6
<input type="checkbox"/>	<input type="checkbox"/>	13% Renewable Energy	7
<input type="checkbox"/>	<input type="checkbox"/>	Credit 3 Enhanced Commissioning	2
<input type="checkbox"/>	<input type="checkbox"/>	Credit 4 Enhanced Refrigerant Management	2
<input type="checkbox"/>	<input type="checkbox"/>	Credit 5 Measurement & Verification	3
<input type="checkbox"/>	<input type="checkbox"/>	Credit 6 Green Power	2



LEED for New Construction and Major Renovation 2009 Project Scorecard

Project Name:
Project Address:

Yes	No	Materials & Resources	64 Points
<input type="checkbox"/>	<input type="checkbox"/>		

Yes	No	Prereq 1 Storage & Collection of Recyclables	Required
<input type="checkbox"/>	<input type="checkbox"/>	Credit 1 Building Reuse	1 to 3
<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.1 Maintain 60% of Existing Walls, Floors & Roof	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2 Maintain 75% of Existing Walls, Floors & Roof	2
<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.3 Maintain 90% of Existing Walls, Floors & Roof	3
<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.4 Building Reuse, Maintain 50% of Interior Non-Structural Elements	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 2.1 Construction Waste Management, Divert 50% from Disposal	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 2.2 Construction Waste Management, Divert 75% from Disposal	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.1 Materials Reuse, 5%	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.2 Materials Reuse, 10%	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.1 Recycled Content, 10% (post-consumer + 3% pre-consumer)	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.2 Recycled Content, 20% (post-consumer + 3% pre-consumer)	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 5.1 Regional Materials, 10% Extracted, Processed & Manufactured Regionally	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 5.2 Regional Materials, 20% Extracted, Processed & Manufactured Regionally	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 6 Ready Renewable Materials	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 7 Certified Wood	1

Yes	No	Indoor Environmental Quality	10 Points
<input type="checkbox"/>	<input type="checkbox"/>		

Yes	No	Prereq 1 Minimum IAQ Performance	Required
<input type="checkbox"/>	<input type="checkbox"/>	Prereq 2 Environmental Tobacco Smoke (ETS) Control	Required
<input type="checkbox"/>	<input type="checkbox"/>	Credit 1 Outdoor Air Delivery Monitoring	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 2 Increased Ventilation	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.1 Construction IAQ Management Plan, During Construction	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.2 Construction IAQ Management Plan, Before Occupancy	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.1 Low-Emitting Materials, Adhesives & Sealants	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.2 Low-Emitting Materials, Paints & Coatings	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.3 Low-Emitting Materials, Flooring Systems	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.4 Low-Emitting Materials, Composite Wood & Airtight Products	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 5 Indoor Chemical & Pollutant Source Control	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 6.1 Controlability of Systems, Lighting	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 6.2 Controlability of Systems, Thermal Comfort	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 7.1 Thermal Comfort, Design	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 7.2 Thermal Comfort, Verification	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 8.1 Daylight & Views, Daylight 75% of Spaces	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 8.2 Daylight & Views, Views for 90% of Spaces	1

Yes	No	Innovation & Design Process	6 Points
<input type="checkbox"/>	<input type="checkbox"/>		

Yes	No	Credit 1.1 Innovation in Design: Provide Specific Title	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2 Innovation in Design: Provide Specific Title	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.3 Innovation in Design: Provide Specific Title	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.4 Innovation in Design: Provide Specific Title	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.5 Innovation in Design: Provide Specific Title	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 2 LEED Accredited Professional	1

Yes	No	Regional Priority Credits	4 Points
<input type="checkbox"/>	<input type="checkbox"/>		

Yes	No	Credit 1.1 Regional Priority Credit: Region Defined	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2 Regional Priority Credit: Region Defined	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.3 Regional Priority Credit: Region Defined	1
<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.4 Regional Priority Credit: Region Defined	1

Yes	No	Project Totals (Certification Estimate)	110 Points
<input type="checkbox"/>	<input type="checkbox"/>		

Not Certified Certified: 40-49 points Silver: 50-59 points Gold: 60-79 points Platinum: 80+ points