



## GreenLearner LEED GA Pocket Study Guide

Standard	Definition Related to LEED
EPA Construction General Permit (CGP)	Storm water management...outlines (NPDES) National Pollutant Discharge Elimination System
Phase I Environmental Site Assessment (ASTM E1527-05)	determines if environmental contamination exists at a project site
Phase II Environment a Site Assessment (ASTM E1903-97, 2002)	must be conducted if Phase I Environmental Site Assessment determines possible contamination
U.S. Department of Agriculture in the U.S. Code of Federal Regulations	defines prime farmland
Federal Emergency Management Agency (FEMA)	defines flood hazard areas
U.S. Army Corps of Engineers' Wetlands Delineation Manual	defines wetlands
Green score of 45 by (ACEEE) American Council for an Energy Efficient Economy	defines low emitting and fuel efficient vehicles
Institute of Transportation Engineers (ITE)	defines parking capacity
ASHRAE Standard 90.1 OR ANSI/ASHRAE/IESNA Standard 90.1	1) defines lighting power densities, lighting zones (indoor and outdoor) 2) Guideline on energy efficiency and used to conduct energy simulations
EPA Act of 1992	regulates water usage (1.6 gpf toilet, 1.0 gpf for urinal, etc.)
EPA WaterSense	Indicates water efficient fixture
Montreal Protocol	banned the production of chlorofluorocarbon (CFC) refrigerants in 1995 and is phasing out hydrochlorofluorocarbon (HCFC) refrigerants
EPA's Clean Air Act	imposed regulations on refrigerants
U.S. Department of Energy's Commercial Buildings Energy Consumption Survey (CBECS)	can be used to estimate energy use and costs
Green-e Electricity	electricity from a renewable source...certifies renewable energy certificates (RECs)
Green-e Climate	certified carbon offsets
International Organization for Standardization (ISO)	determines recycled content
ASHRAE Standard 62.1	1) determines indoor air quality 2) defines operable window requirements
Blower Door Test	tests building air leakage of residential units...follow RESNET or ASTM standard
ANSI Standard S12.60	acoustical standards
Chartered Institution of Building Service Engineers Applications (CIBSE)	natural ventilation guidelines



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<b>Sheet Metal and Air Conditioning National Contractors Association (SMACNA)</b>	regulates indoor air quality during construction
<b>ASHRAE Standard 52.2</b>	sets standard for testing air filters (MERV)
<b>California Department of Public Health (CDPH)</b>	VOC testing requirements (LEED for Schools only)
<b>California Air Resources Board (CARB) 2007</b>	1) regulates VOC content for on-site wet applied products (paint, sealer, etc.) 2) regulates composite wood formaldehyde emissions
<b>South Coast Air Quality Management District (SCAQMD) Rule 1113</b>	also regulates VOC content for on-site wet applied products (paint, sealer, etc.)
<b>South Coast Air Quality Management District (SCAQMD) Rule 1168</b>	regulates VOC content for: adhesives and sealants
<b>Green Seal</b>	certifies lead- and cadmium-free paints
<b>ANSI/BIFMA M7.1-2011</b>	standard to verify indoor air contaminants for furniture
<b>ASHRAE Standard 55</b>	defines factors for thermal comfort
<b>ENERGY STAR Portfolio Manager</b>	online management tool that supports tracking and assessment of energy and water consumption
<b>Sustainable Agriculture Standard</b>	applies to nonwood forest products and bamboo
<b>Forest Stewardship Council (FSC)</b>	certifies sustainably harvested wood
<b>Term</b>	<b>Definition Related to LEED</b>
<b>LEED credit categories</b> (all systems except LEED for Neighborhood Development)	<ol style="list-style-type: none"> <li>1) <b>Location and Transportation</b></li> <li>2) <b>Sustainable Sites</b></li> <li>3) <b>Water Efficiency</b></li> <li>4) <b>Energy and Atmosphere</b></li> <li>5) <b>Materials and Resources</b></li> <li>6) <b>Indoor Environmental Quality</b></li> </ol>
<b>LEED for Neighborhood Development categories</b>	<ol style="list-style-type: none"> <li>1) Smart Location and Linkage</li> <li>2) Neighborhood Pattern and Design</li> <li>3) Green Infrastructure and Buildings</li> </ol>
<b>Levels of LEED certification</b>	<ul style="list-style-type: none"> <li>40 points - LEED Certified</li> <li>50 points - LEED Silver</li> <li>60 points - LEED Gold</li> <li>80 points - LEED Platinum</li> </ul>



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<b>LEED Impact Categories (in order of weighting)</b>	<ol style="list-style-type: none"> <li>1) Climate Change</li> <li>2) Human Health</li> <li>3) Water Resources</li> <li>4) Biodiversity</li> <li>5) Material (Natural) Resources</li> <li>6) Greener Economy</li> <li>7) Community</li> </ol>
<b>LEED Association Factors</b>	<ol style="list-style-type: none"> <li>1) Relative Efficacy</li> <li>2) Duration</li> <li>3) Control</li> </ol>
<b>Minimum Program Requirements (MPRs)</b>	<p>minimum characteristics or conditions that make a project appropriate to pursue LEED certification:</p> <ol style="list-style-type: none"> <li>1) Must be in a permanent location on existing land</li> <li>2) Must use reasonable LEED boundaries</li> <li>3) Must comply with project size requirements</li> </ol>
<b>Scorecard Rules</b>	<ol style="list-style-type: none"> <li>1) 100 base points – the base LEED Rating System is a 100 point system.</li> <li>2) 1 point minimum - All credits in the rating system are worth at least one point.</li> <li>3) Whole points - Rounding conventions are used to ensure that fractional credit values are rounded to the nearest whole point.</li> </ol>
<b>Triple Bottom Line</b>	<ol style="list-style-type: none"> <li>1) People (social capital)</li> <li>2) Planet (natural capital)</li> <li>3) Profit (economic capital)</li> </ol>
<b>Building Commissioning</b>	ensures that systems are designed efficiently, are installed appropriately, and operate as intended
<b>Net Zero</b>	net-zero energy projects use no more energy from the grid than they generate on site
<b>Systems thinking</b>	the built environment is understood as a series of relationships in which each part affects many other parts
<b>Life-cycle approach</b>	looking at all stages of a project, product, or service
<b>Integrative processes</b>	emphasizes connections and communication among professionals and stakeholders throughout the life of a project
<b>The Prius Effect</b>	Delivering real-time energy information in a convenient way by installing meters where operators can act on the information and make changes to use energy more efficiently
<b>Natural Capitalism</b>	capital markets can be used for—rather than against—sustainability, not by eliminating them or adding intensive regulation, but by using leverage points within the system
<b>Charrette</b>	charrettes are intense workshops designed to produce specific deliverables
<b>Volatile organic compounds (VOCs)</b>	organic chemicals given off at room temperature that pollute the air



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<b>Brownfield sites</b>	land where development may be complicated by the presence or potential presence of hazardous substances, pollutants, or contaminants
<b>Heat island effect</b>	increase in air temperature in a developed area compared with an undeveloped area
<b>Solar reflectivity index (SRI)</b>	combines reflectivity with emissivity high SRI values reduce heat gain...the higher the better
<b>Emissivity</b>	ability of a material to emit energy through radiation scale is from 0-1.0...the lower the better
<b>Albedo</b>	reflection coefficient- Albedo is measured on a scale from zero (for no reflection of a perfectly black surface) to 1 (for perfect reflection of a white surface)...the lower the better
<b>Commercial Building Energy End Use (top 3)</b>	1) Space Heating - 36% of total energy consumed 2) Lighting - 21% of total energy consumed 3) Cooling - 8% of total energy consumed
<b>Impervious surfaces</b>	(ex. asphalt and concrete)- prevent percolation and infiltration and encourage water runoff, causing soil erosion and in some places sedimentation of local waterways
<b>Low-impact development (LID) and Green Infrastructure (GI)</b>	approaches to land management that mimic natural systems and manage rainwater as close to the source as possible
<b>Xeriscaping</b>	the use of drought-tolerant native or adapted plants along with rocks, bark mulch, and other landscape elements
<b>Demand response (DR)</b>	encourage electricity customers to reduce their usage during peak demand times
<b>Renewable energy certificates (RECs)</b>	tradable, nontangible commodity associated with the qualities of renewable electricity generation
<b>Environmental Product Declarations (EPDs)</b>	product transparency tool providing environmental impact of product
<b>Thermal comfort</b>	includes temperature, humidity, and air movement
<b>Minimum efficiency reporting value (MERV)</b>	scale to rate the effectiveness of air filters
<b>Credit Interpretation Ruling (CIR)</b>	ruling process is designed to allow Project Teams to obtain technical and administrative guidance...non-precedent-setting (ruling can't be applied to other projects)
<b>LEED Interpretations</b>	official answers to technical inquiries about implementing LEED on a project...precedent-setting (ruling can be applied to other projects)
<b>Green Rater</b>	individual who is working for a LEED Homes provider and performs on-site inspections and testing for the LEED Homes Rating System
<b>Development footprint</b>	the area affected by development or by project site activity. Hardscape, access roads, parking lots, nonbuilding facilities, and the building itself are all included in the development footprint.
<b>Full-time equivalency (FTE)</b>	FTE employees are determined by adding full-time employees and part-time employees, adjusted for their hours of work
<b>Natural ventilation or passive ventilation</b>	providing ventilation by thermal, wind, or diffusion effects through doors, windows, or other intentional openings in the building