



DOCUMENT ADDENDA

For the documents titled: **LEED Reference Guide for Green Building Operations and Maintenance, 2009 Edition** (*second edition, updated April 2010*)

Note: This document contains addenda to the reference guide listed above and will be published on a quarterly basis beginning in April 2010. For more information, visit the USGBC website <http://www.usgbc.org/addenda>.

Page	Location	Credit	Credit Title	Issue	Post Date
viii	Water Efficiency (WE)	n/a	n/a	To the far right of the line for "Credit 4.2," insert "115"	7/19/2010
xiv*	Minimum Program Requirements	n/a	n/a	Replace the last sentence of the first paragraph with "To view the MPRs and the MPR Supplemental Guidance, visit the LEED Resources and Tools section of www.usgbc.org/projecttools ."	11/3/2010
xiv	Above Registration section	n/a	n/a	<p>Insert the following text:</p> <p>Multiple Buildings and On-Campus Projects The 2010 LEED Application Guide for Multiple Buildings and On-Campus Building Projects (available at www.usgbc.org/campusguidance) provides guidance on applying the LEED rating systems to multiple-building and on-campus projects that are on a shared site under the control of a single entity; for example, a corporate or educational campus or government installation. The 2010 LEED Application Guide for Multiple Buildings and On-Campus Building Projects provides guidance for the certification of projects under the Design and Construction and Interior Design and Construction rating systems as well as the LEED for Existing Buildings: Operations & Maintenance rating system. The guidance does not create a new rating system. Users may follow this guidance and apply it to existing rating system requirements for projects on a campus.</p>	11/3/2010
xv	Paragraph at top of page ("Registration" section)	n/a	n/a	In the second line of the paragraph, replace "errata" with "addenda"	11/3/2010

Page	Location	Credit	Credit Title	Issue	Post Date
xv	Credit Interpretation Requests and Rulings	n/a	n/a	<p>Replace the section with the following:</p> <p>In some cases, a LEED project team may encounter challenges when interpreting the requirements of a Minimum Program Requirement (MPR), prerequisite or credit for their project because a specific issue, situation, or a conflict is not addressed by available materials. To address such issues, two processes have been established for each LEED rating system: Project Credit Interpretation Rulings (Project CIR) and LEED Interpretations. See the USGBC and GBCI websites for more information, at www.usgb.org and www.gbci.org.</p> <p>Project CIRs and LEED Interpretations must be submitted online. Provide a brief but clear description of the challenge encountered, refer to the MPR, prerequisite or credit information found in the rating system, reference guide, or supporting documentation and emphasize the intent of the MPR, prerequisite or credit. If possible, the project team should offer potential solutions to the problem or a proposed interpretation.</p> <p>All communications related to Project CIRs and LEED Interpretations will be in electronic format.</p>	5/9/2011
xvii	V. INITIAL CERTIFICATION VS. RECERTIFICATION	n/a	n/a	<p>In the second paragraph, remove the following text:</p> <p>There is no registration fee for registering a recertification project, but recertification project teams must contact GBCI to ensure that the registration fee is waived. The recertification fee is 50% of the fee for the project's LEED for Existing Buildings: Operations & Maintenance initial certification. This fee is due when the application for recertification review is submitted.</p>	11/3/2010
xxii	Above the section "VIII. MULTITENANT BUILDING"	n/a	n/a	<p>Add the following section:</p> <p>Units of Measurement Guidance</p> <p>In order to facilitate certification review by U.S.-based reviewers, it is necessary to submit pertinent aspects of review-related documentation in English and convert units to U.S. Standard (i.e. Imperial) units of measure, unless noted otherwise in the credit or prerequisite description. It is not necessary to translate every aspect of every construction document into English and imperial units, but only those necessary for evaluation of LEED criteria. The project team should be prepared to provide additional translation(s) if requested by the reviewer in their preliminary review comments.</p>	11/3/2010

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xxv	XIII. TOOLS FOR REGISTERED PROJECTS	n/a	n/a	Replace the first paragraph with the following: LEED offers additional resources for LEED project teams on the USGBC website, at www.usgbc.org/projecttools . The LEED Resources and Tools website provides resources for starting the project, including rating system addenda, documentation requirements, and referenced industry standards.	11/3/2010
xxv	XIII. TOOLS FOR REGISTERED PROJECTS	n/a	n/a	Make the first sentence of the second, third, and fourth paragraphs bold so it becomes " Minimum Narrative Requirements, Policy, Program, and Plan Models, and Declarant Definitions and Other Definitions ," respectively	11/3/2010
xxvi	XIII. TOOLS FOR REGISTERED PROJECTS	n/a	n/a	At the end of the last line of the fifth paragraph, remove the quotations	7/19/2010
28	APPROACH 1	SSc4	Alternative Commuting Transportation	Replace section with that of the supplementary document: https://www.usgbc.org/ShowFile.aspx?DocumentID=9315	5/9/2011
31	Second paragraph (above "9. Exemplary Performance" section)	SSc4	Alternative Commuting Transportation	In the fifth line, replace "4" with "5" so the text becomes "(100 occupants x 2 trips per day x 5 days per week)"	7/19/2010
31	9. Exemplary Performance	SSc4	Alternative Commuting Transportation	Replace 95% with 80% and remove "trips equivalent to an average vehicle ridership (as defined by SCAQMD) of 20"	5/9/2011
38	Equation 2	SSc5	Site Development – Protect or Restore Open Habitat	Replace with "Natural Vegetated Roof Area \geq 0.05 (Total Site Area)"	11/3/2010
52	Table 1	SSc7.1	Heat Island Effect, Non-Roof	Replace SRI for "Typical new gray concrete" with 38	5/9/2011
70	OPTION 2	SSc8	Light Pollution	At end of the second paragraph, add the sentence "Lighting of flags must also meet the shielding requirements."	11/3/2010
75	Definitions	SSc8	Light Pollution	In alphabetical order, insert the term "emergency lighting" with the text "Emergency lighting as defined by the Illuminating Engineering Society of North America is lighting designed to supply illumination essential to the safety of life and property in the event of failure of the normal supply."	5/9/2011
81*	Requirements	WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	In the section, replace the three instances of "1993" with "1994"	7/19/2010
82	Environmental Issues	WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	In the section, remove both instances of "potable"	7/19/2010

Page	Location	Credit	Credit Title	Issue	Post Date
84	Table 1	WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	In the fourth row of the table in the "EPA WaterSense Standards" column, replace "1.5 - 2.0^b" with "2.0^b"	7/19/2010
84	Table 1	WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	In footnote "b," replace "2.0 gmp" with "2.0 gpm"	7/19/2010
84	Paragraph below table	WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	Replace the paragraph with the following: In certain cases, faucets with low-flow rates are not appropriate. For example, in kitchen sinks, faucets are used to fill pots and buckets. Using a low-flow rate for tasks where the volume of water is predetermined does not save water and will likely cause user dissatisfaction and inefficiencies. Consider alternative strategies to reduce water use, such as installing special-use pot fillers and faucets or foot pedal-operated faucets.	7/19/2010
84	Second paragraph below Table 1	WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	Remove the paragraph beginning with, "Although water-efficient dishwashers..."	5/9/2011
87	Table 3a	WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	In the sixth row ("Lavatory Faucet"), replace the duration (sec) of 15 with 30	2/2/2011
87	Table 4	WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	In the fifth row of the table in the column "Flow rate," replace "1.8 gpm" with "≤ 2.2 gpm"	7/19/2010
87	Table 4	WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	In the seventh row of the table in the "Flow Fixture" column, replace "Low-flow shower" with "WaterSense shower"	7/19/2010
87	Table 4	WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	In the seventh row of the table in the "Flow Rate" column, replace "1.8 gpm" with "≤ 2.0 gpm"	7/19/2010
88	First paragraph on page (above "Baseline Case Water Consumption" section)	WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	Replace the first sentence with "Private or private use applies to plumbing fixtures in residences, apartments, and dormitories, to private (non-public) bathrooms in transient lodging facilities (hotels and motels), and to private bathrooms in hospitals and nursing facilities."	7/19/2010

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88	Below "Baseline Case Water Consumption"	WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	<p>Add in the following section:</p> <p>Eligible Fixtures</p> <p>This prerequisite is limited to savings generated by the following water using fixtures and fixture fittings as applicable to the project: water closets, urinals, lavatory faucets, showers, kitchen sink faucets and pre-rinse spray valves, as shown in Table 1.</p> <p>The "Kitchen sinks" category encompasses all sinks in public or private buildings that are used with patterns and purposes similar to a sink in a residential kitchen; break room sinks would be included. However professional grade / commercial faucets such as those used in a commercial kitchen would not be included. The "Public lavatory faucets" and "Private lavatory faucets" categories encompass all sinks used primarily for hand-washing regardless of location. Faucets whose usage patterns and flow rates are regulated for medical or industrial purposes (e.g. laboratory sinks) and do not fall under the definition of private or public use are not included. Faucets used exclusively for filling operations (e.g. pot-filler) can be excluded. All other fixtures and fixtures fittings must be included in the calculations unless there are special circumstances that justify excluding them.</p>	2/2/2011
90	11. Resources	WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	<p>In alphabetical order, insert the following text:</p> <p>Alliance for Water Efficiency http://www.allianceforwaterefficiency.org/ The Alliance for Water Efficiency provides information and assistance on water conservation efforts.</p>	7/19/2010
90	11. Resources	WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	<p>Remove the following text:</p> <p>Fine Homebuilding Choosing a Toilet http://www.taunton.com/finehomebuilding/pages/h00042.asp This article includes several varieties of water-efficient toilets.</p>	7/19/2010
90	11. Resources	WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	<p>In the resource "Rocky Mountain Institute, Water," replace the text below the resource header with the following:</p> <p>http://www.rmi.org/rmi/pid172 This portion of RMI's website is devoted to water resource efficiency.</p>	7/19/2010
90	11. Resources	WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	<p>In the resource "U.S. EPA, Watersense," underline the website "http://www.epa.gov/watersense/."</p>	7/19/2010

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91	11. Resources	WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	Remove the following text: U.S. EPA, Water Use Efficiency Program http://www.epa.gov/owm/water-efficiency This website provides an overview of EPA's Water Use Efficiency Program and information about using water more efficiently.	7/19/2010
91	11. Resources	WEp1	Minimum Indoor Plumbing Fixture and Fitting Efficiency	Replace the resource "Water Closet Performance Testing," with the following: Water Studies http://www.ebmud.com/resource-center/publications/studies The site provides a variety of studies related to water.	7/19/2010
105	Project Site Viability Calculation	WEc3	Water Efficient Landscaping	Replace the second and third sentences of the paragraph with "A site without vegetation or ecologically appropriate features on the grounds is eligible for this credit if its roof and/or courtyard garden space or outdoor planters constitute at least 5% of the total area. Project site viability is determined by calculating the portion of the total building site area covered with planters and/or gardens."	7/19/2010
105	Irrigation Water Use Calculation	WEc3	Water Efficient Landscaping	At the end of the third paragraph, add the following text: Additionally the credit can be met when landscape irrigation is provided by raw water (excluding naturally occurring surface bodies of water, streams, or rivers, and ground water) that would otherwise be treated specifically for nonpotable uses. Only ponds designed solely for the purposes of stormwater retention or detention can be used for this credit.	2/2/2011
109	Equation 5	WEc3	Water Efficient Landscaping	Replace "CE" with "(1 – CE)"	2/2/2011
141*	CASE 2, OPTION 1	EAp2	Minimum Energy Efficiency Performance	Replace the paragraph with the following text: Demonstrate energy efficiency performance that is better than 69% of similar buildings (69th percentile or better) by benchmarking against national source energy data provided in the Portfolio Manager tool as an alternative to energy performance ratings. Follow the detailed instructions in the LEED Reference Guide for Green Building Operations & Maintenance, 2009 Edition.	11/3/2010
143	3. Summary of Referenced Standards	EAp2	Minimum Energy Efficiency Performance	Replace the text with "Refer to the Summary of Referenced Standards section in EA Credit 1."	11/3/2010

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146	4. Implementation	EAp3	Fundamental Refrigerant Management	After the first sentence, add, "HCFCs are not part of this prerequisite."	5/9/2011
152*	CASE 2, OPTION 1	EAc1	Optimize Energy Performance	Replace the paragraph with the following text: Demonstrate energy efficiency performance that is better than 71% of similar buildings (71st percentile or better) by benchmarking against national source energy data provided in the Portfolio Manager tool as an alternative to energy performance ratings. Follow the detailed instructions in the LEED Reference Guide for Green Building Operations & Maintenance, 2009 Edition.	11/3/2010
157	First paragraph on page (begins with "EPA continues")	EAc1	Optimize Energy Performance	Replace the last sentence of the paragraph with "If the location for an international project is not listed, consult ASHRAE 90.1-2007 Appendices B and D to determine a comparable US city."	11/3/2010
160	CASE 2, OPTION 1: Adjusted Benchmark Score	EAc1	Optimize Energy Performance	In the fifth line of the first paragraph, replace "average" with "mean" so the text becomes "...better than the national mean to calculate..."	11/3/2010
208	First paragraph (begins with "can purchase")	EAc4	On-Site and Off-Site Renewable Energy	In the third line, insert "of" after "purchase" so the text becomes "The purchase of Green-e certified RECs..."	11/3/2010
210	Equation 1	EAc4	On-Site and Off-Site Renewable Energy	In the seventh line of the paragraph, replace "(1 MBtus/1,000 MBtus)" with "(10 MBtus/1,000 MBtus)"	11/3/2010
211	11. Resources	EAc4	On-Site and Off-Site Renewable Energy	Add the following resource: Low Impact Hydropower Institute http://lowimpacthydro.org The Low Impact Hydropower Institute is a non-profit organization and certification body that establishes criteria against which to judge the environmental impacts of hydropower projects in the United States.	5/9/2011
220	Table 2	EAc5	Enhanced Refrigerant Management	In the column header on the far right, replace "Absorption" with "Centrifugal" so the header becomes "23-Year Life (Screw, Centrifugal Chillers)"	11/3/2010
221	Paragraph that begins with "Refrigerant leakage"	EAc5	Enhanced Refrigerant Management	Remove the last sentence: "Guidance for submitting approval for nondefault leakage rates can be found on the LEED Registered Project Tools page (http://www.usgbc.org/projecttools)."	11/3/2010
223	Sample Calculation 2	EAc5	Enhanced Refrigerant Management	In the first line of the first bullet item, replace "absorption" with "centrifugal"	11/3/2010

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223	Sample Calculation 3	EAc5	Enhanced Refrigerant Management	In the first bullet item, replace “absorption” with “centrifugal”	11/3/2010
237	Table	n/a	n/a	In the fifth row of the “Title” column, insert a dash between “Electric” and “Powered” so the text becomes “Sustainable Purchasing – Electric-Powered Equipment”	7/19/2010
241	4. Implementation	MRp1	Sustainable Purchasing Policy	In the second paragraph, replace the third sentence with the following: The sustainable purchasing policy must adhere to the LEED 2009 for Existing Buildings: Operations & Maintenance policy model located in the Introduction section of this Reference Guide.	7/19/2010
249	11. Resources	MRp2	Solid Waste Management Policy	Replace "U.S. EPA WasteWise Program" title, website and description with the following: U.S. EPA WasteWise Program www.epa.gov/wastewise WasteWise is a free, voluntary EPA program that U.S. organizations can use to track, manage, and reduce their municipal solid waste and select industrial wastes.	5/9/2011
251*	Requirements	MRC1	Sustainable Purchasing – Ongoing Consumables	In the fifth line of the first paragraph, replace the period after “5” with a colon so the text becomes “...MR Credit 5: Sustainable Purchasing...”	7/19/2010
304	11. Resources	MRC6	Solid Waste Management – Waste Stream Audit	Replace "U.S. EPA WasteWise Program" title, website and description with the following: U.S. EPA WasteWise Program www.epa.gov/wastewise WasteWise is a free, voluntary EPA program that U.S. organizations can use to track, manage, and reduce their municipal solid waste and select industrial wastes.	5/9/2011
309	11. Resources	MRC7	Solid Waste Management – Ongoing Consumables	Replace "U.S. EPA WasteWise Program" title, website and description with the following: U.S. EPA WasteWise Program www.epa.gov/wastewise WasteWise is a free, voluntary EPA program that U.S. organizations can use to track, manage, and reduce their municipal solid waste and select industrial wastes.	5/9/2011

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315	11. Resources	MRC8	Solid Waste Management – Durable Goods	Replace "U.S. EPA WasteWise Program" title, website and description with the following: U.S. EPA WasteWise Program www.epa.gov/wastewise WasteWise is a free, voluntary EPA program that U.S. organizations can use to track, manage, and reduce their municipal solid waste and select industrial wastes.	5/9/2011
365	Ventilation Airflow Monitoring in Nondensely Occupied Spaces	IEQc1.2	Indoor Air Quality Best Management Practices – Outdoor Air Delivery Monitoring	Delete the last sentence in the section, "Outdoor air delivery monitoring within nondensely occupied spaces may be counted..."	5/9/2011
379*	Requirements	IEQc1.4	Indoor Air Quality Best Management Practices – Reduce Particulates in Air Distribution	Replace the paragraph with the following: In mechanically ventilated buildings, each ventilation system that supplies outdoor air shall comply with the following during the performance period: <ul style="list-style-type: none"> • Particle filters or air cleaning devices shall clean the outdoor air at any location prior to its introduction to occupied spaces. • These filters or devices shall be rated a minimum efficiency reporting value (MERV) of 13 in accordance with ASHRAE Standard 52.2 or greater for all outside air intakes and inside air recirculation returns. • Establish and follow a regular schedule for maintenance and replacement of these filtration media according to the manufacturer's recommended interval. 	11/3/2010
Entire section	All	IEQc2.4	Daylight and Views	Replace section with that of the supplementary document: https://www.usgbc.org/ShowFile.aspx?DocumentID=9378	5/9/2011
453*	Requirements	IEQc3.5	Green Cleaning – Indoor Chemical and Pollutant Source Control	Remove the second paragraph: Provide containment drains plumbed for appropriate disposal of hazardous liquid wastes in places where water and chemical concentrate mixing occurs for laboratory purposes.	7/19/2010

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455	Maintenance	IEQc3.5	Green Cleaning – Indoor Chemical and Pollutant Source Control	Remove the second paragraph: Give special consideration to the location of containment drains to ensure that hazardous waste is disposed of properly and prevent environmental damage or contamination of water systems.	7/19/2010
467*	Requirements	IOc1	Innovation in Operations	In the header, change “(1 point)” to “(1 – 4 Points)”	2/2/2011
467*	Requirements	IOc1	Innovation in Operations	Replace the last sentence of the paragraph with “Projects may pursue up to 4 Pilot Credits total.”	2/2/2011
487*	Requirements	RPc1	Regional Priority	In the second paragraph, replace the last sentence with "The USGBC has prioritized credits for projects located in the U.S., Puerto Rico, the U.S. Virgin Islands, and Guam. All other international projects should check the database for eligible Regional Priority credits."	11/3/2010
490	Glossary, breathing zone	n/a	n/a	Make bold the “B” of the first word so the text becomes “ Breathing zone is the region...”	7/19/2010
494	Glossary	n/a	n/a	In alphabetical order, insert the term " emergency lighting " with the text "Emergency lighting as defined by the Illuminating Engineering Society of North America is lighting designed to supply illumination essential to the safety of life and property in the event of failure of the normal supply."	5/9/2011
501	Glossary	n/a	n/a	In alphabetical order, insert the term " movable furniture and partitions " with the text "Movable furniture and partitions are those that can be moved to provide access to the view by the user without the need for tools or assistance from special trades and facilities management."	5/9/2011

*The purpose of these Rating System changes within the Rating System portions of the *LEED Reference Guide for Green Building Operations and Maintenance* is to align with the LEED Rating System that comprises the guide: <http://www.usgbc.org/ShowFile.aspx?DocumentID=5545>.

Note: The online version of the Rating System at <http://www.usgbc.org/ShowFile.aspx?DocumentID=5545> takes precedent over the Rating System portions of the LEED Reference Guides in project guidance and application; project teams are required to adhere to the Rating System and Rating System addenda in accordance with the project’s registration date.