



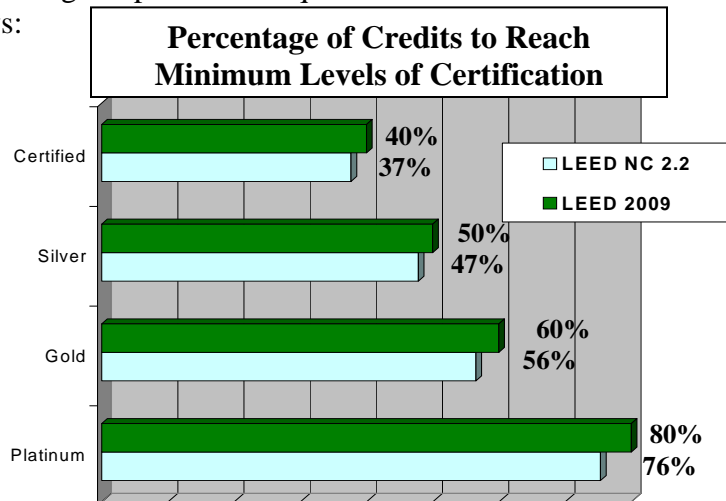
## Proposed Changes to LEED 2009 Rating System for New Construction

The USGBC recently unveiled the draft version of LEED 2009 for public comment. This new rating system will replace LEED NC v 2.2 effective January 2009. The first review period will end June 22. Comments can be made by visiting the [USGBC's website](#) and choosing the rating system you would like to comment on.

LEED 2009 incorporates dynamic changes in its update. The biggest changes are a new point 100 point scale, increased from a 69 point scale in NC v 2.2, and weightings for more important credits. Certification thresholds have also been made more difficult, percentage wise, to reach each level certification. This is in keeping with the USGBC's plan on trying to incrementally move the market towards higher performance goals with each revision of the rating system.

The chart below shows how a greater percentage of points are required to reach each level of certification. The breakdown is as follows:

- **Certified = 40-49 points**  
*was 26-32 points or 37 - 46%*
- **Silver = 50 -59 points**  
*was 33-38 points or 47 - 55%*
- **Gold = 60-79 points**  
*was 39-52 points or 56 - 75%*
- **Platinum = 80 -100 points**  
*was 53-69 points or 76 - 100%*

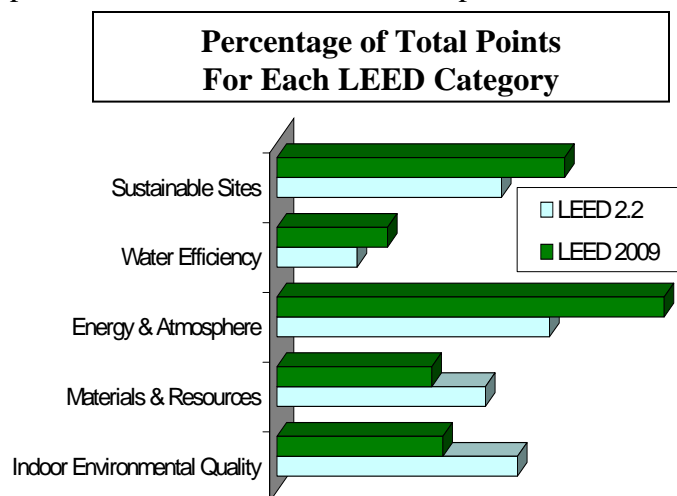


The points were also re-weighted with a higher focus given to points that

were deemed more important. A matrix was developed to give a scientific approach to the weightings and was based on the EPA's TRACI environmental impact categories and weighted according to environmental importance. A value for each credit was established at one point and maximum credits were weighted above 1 point based on importance established by the matrix. Thus some categories gained significantly in importance and some decreased in importance.

A breakdown of each category is as follows:

- **Sustainable Sites = 26 points**  
*was 14 points or 20%*
- **Water Efficiency = 10 Points**  
*was 5 points or 7%*
- **Energy & Atmosphere = 35 points**  
*was 17 points or 24.6%*
- **Materials & Resources = 14 points**  
*was 13 points or 19%*
- **Indoor Environmental Quality – 15 Pt**  
*was 15 points or 21.7%*



The categories that gained the most are

Energy & Atmosphere, Sustainable Sites and Water Efficiency. In addition to the greater focus on water efficiency, the only real addition to LEED 2009 comes in the form of a pre-requisite for water efficiency, requiring a 20% reduction in potable water use.

The USGBC addresses regional issues for the first time in LEED 2009. In 2.2, four points were available for ID credits. In the 2009 draft, six standard ID points are available as well as four more for regional issues. The bonus regional ID points are determined both regionally and locally with the help of USGBC chapters. None of the regional bonus points have been published yet.

### Credit Weighting Adjustments

The goal of the weighting is to give more fairness to the rating system. One point might have a significantly higher environmental impact than another, but in 2.2, every credit was worth the same one point. In LEED 2009, points were given greater weight based on their environmental benefits.

This table includes all of the points that were given greater weight. Notice that all of the water efficiency and Energy & Atmosphere points were increased. Materials & Resources has only one credit that was given more weight and there were no credits that were given increased weight in Indoor Environmental Quality.

The re-weighting can be seen as both a positive and a negative for MCAA contractors. Credits directly impacting plumbing contractors were doubled, but as a whole, water efficiency is still the smallest point category. Optimizing Energy Performance was the biggest single point increase. This ties in largely to the mechanical systems heating and cooling the building, thus a big impact for mechanical contractors. However, with no additional points given for Indoor Environmental Quality, five or six credits directly impacting mechanical contractors were essentially given less significance. Service contractors receive mixed impact as well. M&V and commissioning were given more points, but thermal comfort verification remained the same.

	LEED NC 2.2	LEED 2009
<b>SS 2 - Development Density</b>	1	5
<b>SS 4.1 - Alternative Transportation - Public Transportation Access</b>	1	6
<b>SS 4.3 - Alternative Transportation - Low Emitting and Fuel Efficient Vehicles</b>	1	3
<b>SS 4.4 - Alternative Transportation - Parking Capacity</b>	1	2
<b>WE 1.1 Water Efficient Landscaping - Reduce Potable Water by 50%</b>	1	2
<b>WE 1.2 Water Efficient Landscaping - No Potable Water Use</b>	1	2
<b>WE 2 - Innovative Wastewater Technologies</b>	1	2
<b>WE 3.1 - Water Use Reduction 30%</b>	1	2
<b>WE 3.2 - Water Use Reduction 40%</b>	1	2
<b>EA 1 - Optimize Energy Performance</b>	2-10	1-19
<b>EA 2 - Onsite Renewable Energy</b>	1-3	1-7
<b>EA 3 - Enhanced Commissioning</b>	1	2
<b>EA 4 - Enhanced Refrigerant Management</b>	1	2
<b>EA 5 - Measurement &amp; Verification</b>	1	3
<b>EA 6 - Green Power</b>	1	2
<b>MR 1.1 - Building Reuse - Maintain 75% of Existing Walls, Floor &amp; Roof</b>	1	2

## Changes in Credit Requirements:

In terms of credit requirements, LEED 2009 greatly resembles LEED NC 2.2. Most of the language for credit requirements remains exactly the same. Here is a list of major changes in the draft version of LEED 2009 for New Construction:

- **SS 2 – Development Density** – Tougher restrictions and documentation is applied. Lease agreements must be used to document. 8 of 10 requirements need to already be in place.
- **SS 4.3 - Alternative Transportation: Low Emitting and Fuel Efficient Vehicles** – Added a paid parking for 5% of the FTE as an alternative for option 2. Added a new option of a hybrid sharing program (1 per 8 people)
- **SS 4.4 – Alternative Transportation: Parking Capacity** – Added new option for mixed use buildings.
- **WE Prerequisite 1 – 20% Water Use Reduction** – New Pre-requisite. Same calculations as when it was a separate credit, but added EPA 2005 as well as EPA 1992.
- **WE 1.1 & 1.2 – Water Efficient Landscaping** – Allowed the pumping of groundwater seepage to be included in calculation.
- **WE 3.1 Water Use Reduction – Changed from 20 to 30% reduction.** Promoting the use of Watersense fixtures and fittings to be used where available.
- **WE 3.2 Water Use Reduction – Changed from 30 to 40% reduction.** Requires meeting additional standards set forth by the Energy Policy Act of 2005, not just 1992 and code requirements of either the UPC 2006 or IPC 2006.
- **EA Prerequisite 2 – Fundamental Commissioning** – Updated from ASHRAE 90.1-2004 to 2007. LEED NC v 2.2 allowed buildings to just meet ASHRAE 90.1, LEED 2009 makes you beat performance by 10%. Must exceed by 10% for new buildings and 5% for existing buildings as a pre-requisite. Allows for three options to comply. This is in lieu of the adjustment requiring 2 points (14% energy decrease) from 90.1-2004.
- **EA 1 – Optimize Energy Performance.** No longer need the 2 point minimum. A 10% reduction is incorporated with the pre-requisite, so the points begin at a 12% reduction for new buildings. Points were modified as follows:

New Buildings		Existing Building		Points	
NC 2.2 /	2009	NC 2.2 /	2009	NC 2.2 /	2009
10%	12%	3.5 %	8%	1	1
14%	16%	7%	12%	2	3
17.5%	20%	10.5%	16%	3	5
21%	24%	14%	20%	4	7
24.5%	28%	17.5%	24%	5	9
28%	32%	21%	28%	6	11
31.5	36%	24.5%	32%	7	13
35%	40%	28%	36%	8	15
38.5%	44%	31.5%	40%	9	17
42%	48%	35%	44%	10	19

- **EA 2 – On-site Renewable** –The minimum percentage for this credit decreased, making it easier to achieve. This might because of the infrequency of this credit on all but gold and platinum buildings. Points were modified as follows:

Percent Renewable Energy		Points	
NC 2.2 / <b>2009</b>		NC 2.2 / <b>2009</b>	
2.5%	<b>1%</b>	1	<b>1</b>
7.5%	<b>5%</b>	2	<b>3</b>
12.5%	<b>9%</b>	3	<b>5</b>
N/A	<b>13%</b>	N/A	<b>7</b>

- **EA 3 – Enhanced Commissioning** – No longer does the commissioning agent need fully to be third party. The LEED consultant may act as the CxA if they are providing no sustainable design or construction guidance or oversight or if their contract is held entirely by the owner. An added a caveat from LEED NC 2.2’s commissioning prerequisite for the 2009 version of enhanced commissioning is of great importance to MCAA contractors:

*For projects smaller than 50,000 gross square feet, the CxA may include qualified persons on the design or construction teams who have the required experience.*

- **EQ Prerequisite 1 – Minimum IAQ Performance.** Updated the referenced ASHRAE standard from 62.1-2004 to 62.1-2007.
- **EQ Prerequisite 2 – Environmental Tobacco Smoke Control** – Clarified some of the definitions and requirements for hotels and zero lot line buildings.
- **EQ 1 – Outdoor Air Delivery Monitoring** – Clarified that densely populated spaces must be monitored as well.
- **EQ 4.3 – Low Emitting Materials: Flooring Systems** – Changed from carpet systems to include all types of flooring systems. Requires hard surface floor finishes meeting SCAQMD compliance. Also included are tile grout and adhesives.
- **EQ 5 – Indoor Chemical & Pollutant Source Control** – 2009 now requires containment drains to be plumbed for appropriate disposal of hazardous liquid wastes in places where water and chemical concentrate mixing occurs for laboratory purposes.
- **EQ 7.2 – Thermal Comfort: Verification** – To achieve this point you now *must* achieve EQ 7.1 Thermal Comfort: Design. Also added to this requirement is the installation of a permanent monitoring system.



# LEED for New Construction and Major Renovation 2009 Project Scorecard

Project Name:  
Project Address:

Yes ? No

			<b>Sustainable Sites</b>	<b>26</b>	<b>Points</b>
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<b>Y</b>			<b>Prereq 1 Construction Activity Pollution Prevention</b>	Required
			<b>Credit 1 Site Selection</b>	1
			<b>Credit 2 Development Density &amp; Community Connectivity</b>	5
			<b>Credit 3 Brownfield Redevelopment</b>	1
			<b>Credit 4.1 Alternative Transportation, Public Transportation Access</b>	6
			<b>Credit 4.2 Alternative Transportation, Bicycle Storage &amp; Changing Rooms</b>	1
			<b>Credit 4.3 Alternative Transportation, Low-Emitting &amp; Fuel-Efficient Vehicles</b>	3
			<b>Credit 4.4 Alternative Transportation, Parking Capacity</b>	2
			<b>Credit 5.1 Site Development, Protect or Restore Habitat</b>	1
			<b>Credit 5.2 Site Development, Maximize Open Space</b>	1
			<b>Credit 6.1 Stormwater Design, Quantity Control</b>	1
			<b>Credit 6.2 Stormwater Design, Quality Control</b>	1
			<b>Credit 7.1 Heat Island Effect, Non-Roof</b>	1
			<b>Credit 7.2 Heat Island Effect, Roof</b>	1
			<b>Credit 8 Light Pollution Reduction</b>	1

Yes ? No

			<b>Water Efficiency</b>	<b>10</b>	<b>Points</b>
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			<b>Prereq 1 Water Use Reduction, 20% Reduction</b>	Required
			<b>Credit 1.1 Water Efficient Landscaping, Reduce by 50%</b>	2
			<b>Credit 1.2 Water Efficient Landscaping, No Potable Use or No Irrigation</b>	2
			<b>Credit 2 Innovative Wastewater Technologies</b>	2
			<b>Credit 3.1 Water Use Reduction, 30% Reduction</b>	2
			<b>Credit 3.2 Water Use Reduction, 40% Reduction</b>	2

Yes ? No

			<b>Energy &amp; Atmosphere</b>	<b>35</b>	<b>Points</b>
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<b>Y</b>			<b>Prereq 1 Fundamental Commissioning of the Building Energy Systems</b>	Required
			<b>Prereq 2 Minimum Energy Performance: 10% New Bldgs or 5% Existing Bldg Renovations</b>	Required
			<b>Prereq 3 Fundamental Refrigerant Management</b>	Required
			<b>Credit 1 Optimize Energy Performance</b>	1 to 19
			12% New Buildings or 8% Existing Building Renovations	1
			16% New Buildings or 12% Existing Building Renovations	3
			20% New Buildings or 16% Existing Building Renovations	5
			24% New Buildings or 20% Existing Building Renovations	7
			28% New Buildings or 24% Existing Building Renovations	9
			32% New Buildings or 28% Existing Building Renovations	11
			36% New Buildings or 32% Existing Building Renovations	13
			40% New Buildings or 36% Existing Building Renovations	15
			44% New Buildings or 40% Existing Building Renovations	17
			48% New Buildings or 44% Existing Building Renovations	19
			<b>Credit 2 On-Site Renewable Energy</b>	1 to 7
			1% Renewable Energy	1
			5% Renewable Energy	3
			9% Renewable Energy	5
			13% Renewable Energy	7
			<b>Credit 3 Enhanced Commissioning</b>	2
			<b>Credit 4 Enhanced Refrigerant Management</b>	2
			<b>Credit 5 Measurement &amp; Verification</b>	3
			<b>Credit 6 Green Power</b>	2

Yes ? No

			<b>Materials &amp; Resources</b>	<b>14</b>	<b>Points</b>
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<b>Y</b>				Prereq 1 <b>Storage &amp; Collection of Recyclables</b>	Required
				Credit 1.1 <b>Building Reuse</b> , Maintain 75% of Existing Walls, Floors & Roof	2
				Credit 1.2 <b>Building Reuse</b> , Maintain 95% of Existing Walls, Floors & Roof	1
				Credit 1.3 <b>Building Reuse</b> , Maintain 50% of Interior Non-Structural Elements	1
				Credit 2.1 <b>Construction Waste Management</b> , Divert 50% from Disposal	1
				Credit 2.2 <b>Construction Waste Management</b> , Divert 75% from Disposal	1
				Credit 3.1 <b>Materials Reuse</b> , 5%	1
				Credit 3.2 <b>Materials Reuse</b> , 10%	1
				Credit 4.1 <b>Recycled Content</b> , 10% (post-consumer + ½ pre-consumer)	1
				Credit 4.2 <b>Recycled Content</b> , 20% (post-consumer + ½ pre-consumer)	1
				Credit 5.1 <b>Regional Materials</b> , 10% Extracted, Processed & Manufactured Regionally	1
				Credit 5.2 <b>Regional Materials</b> , 20% Extracted, Processed & Manufactured Regionally	1
				Credit 6 <b>Rapidly Renewable Materials</b>	1
				Credit 7 <b>Certified Wood</b>	1
	Yes	?	No		

			<b>Indoor Environmental Quality</b>	<b>15</b>	<b>Points</b>
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<b>Y</b>				Prereq 1 <b>Minimum IAQ Performance</b>	Required
<b>Y</b>				Prereq 2 <b>Environmental Tobacco Smoke (ETS) Control</b>	Required
				Credit 1 <b>Outdoor Air Delivery Monitoring</b>	1
				Credit 2 <b>Increased Ventilation</b>	1
				Credit 3.1 <b>Construction IAQ Management Plan</b> , During Construction	1
				Credit 3.2 <b>Construction IAQ Management Plan</b> , Before Occupancy	1
				Credit 4.1 <b>Low-Emitting Materials</b> , Adhesives & Sealants	1
				Credit 4.2 <b>Low-Emitting Materials</b> , Paints & Coatings	1
				Credit 4.3 <b>Low-Emitting Materials</b> , Flooring Systems	1
				Credit 4.4 <b>Low-Emitting Materials</b> , Composite Wood & Agrifiber Products	1
				Credit 5 <b>Indoor Chemical &amp; Pollutant Source Control</b>	1
				Credit 6.1 <b>Controllability of Systems</b> , Lighting	1
				Credit 6.2 <b>Controllability of Systems</b> , Thermal Comfort	1
				Credit 7.1 <b>Thermal Comfort</b> , Design	1
				Credit 7.2 <b>Thermal Comfort</b> , Verification	1
				Credit 8.1 <b>Daylight &amp; Views</b> , Daylight 75% of Spaces	1
				Credit 8.2 <b>Daylight &amp; Views</b> , Views for 90% of Spaces	1
	Yes	?	No		

			<b>Innovation &amp; Design Process</b>	<b>6</b>	<b>Points</b>
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				Credit 1.1 <b>Innovation in Design</b> : Provide Specific Title	1
				Credit 1.2 <b>Innovation in Design</b> : Provide Specific Title	1
				Credit 1.3 <b>Innovation in Design</b> : Provide Specific Title	1
				Credit 1.4 <b>Innovation in Design</b> : Provide Specific Title	1
				Credit 1.5 <b>Innovation in Design</b> : Provide Specific Title	1
				Credit 2 <b>LEED® Accredited Professional</b>	1
	Yes	?	No		

			<b>Regional Bonus Credits</b>	<b>4</b>	<b>Points</b>
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				Credit 1.1 <b>Region Specific Environmental Priority</b> : Region Defined	1
				Credit 1.2 <b>Region Specific Environmental Priority</b> : Region Defined	1
				Credit 1.3 <b>Region Specific Environmental Priority</b> : Region Defined	1
				Credit 1.4 <b>Region Specific Environmental Priority</b> : Region Defined	1
	Yes	?	No		

			<b>Project Totals (Certification Estimates)</b>	<b>110</b>	<b>Points</b>
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Not Certified

Certified: 40-49 points Silver: 50-59 points Gold: 60-79 points Platinum: 80+ points