

The New LEED® 2009 Version 3.0: Updates & Improvements

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Hartford Chapter CSI
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The New LEED® 2009 Update

Learning Objectives

- **Identify Major Changes Incorporated Into LEED 2009**
- **Understand LEED Minimum Program Requirements Required to Achieve Certification**
- **Recognize Changes to LEED-Online**
- **Understand Additional Reporting Requirements Incorporated Into LEED 2009**

The New LEED® 2009 Update

Major Changes Incorporated Into LEED 2009

The New LEED® 2009 Update

Majors Changes to LEED 2009

- **Harmonization**
- **Credit Weightings**
- **Regionalization**

The New LEED® 2009 Update

Majors Changes to LEED 2009

- **Harmonization**
 - **Credits & Prerequisites From All LEED Commercial & Institutional Rating Systems Have Been Consolidated & Aligned**
 - **Creates Consistency Across All LEED 2009 Rating Systems**
 - **Precedent-setting & Clarifying Information From Credit Interpretation Rulings (CIRs) Incorporated Into Rating Systems**
 - **LEED for Homes & LEED for Neighborhood Development Have Not Been Changed in LEED 2009**

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- Harmonization

100 POINT SCALE



40-49

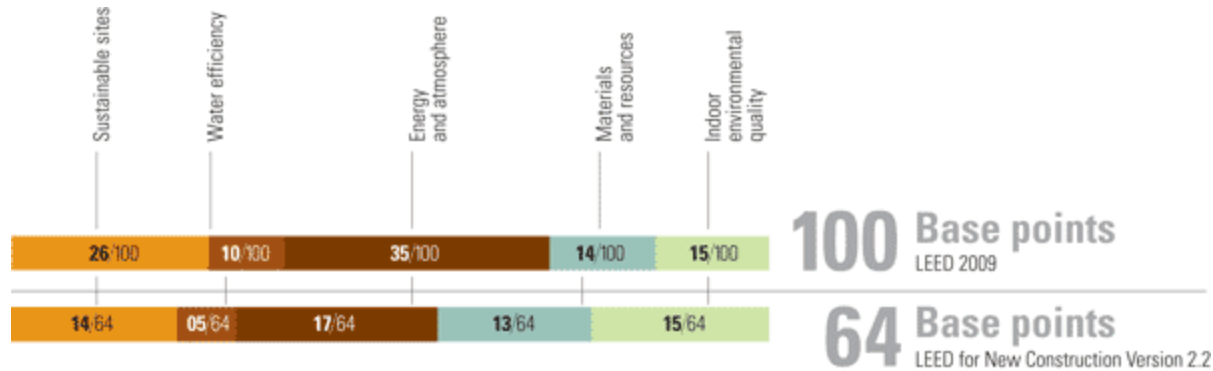
50-59

60-79

80+

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■ Harmonization



Certification thresholds

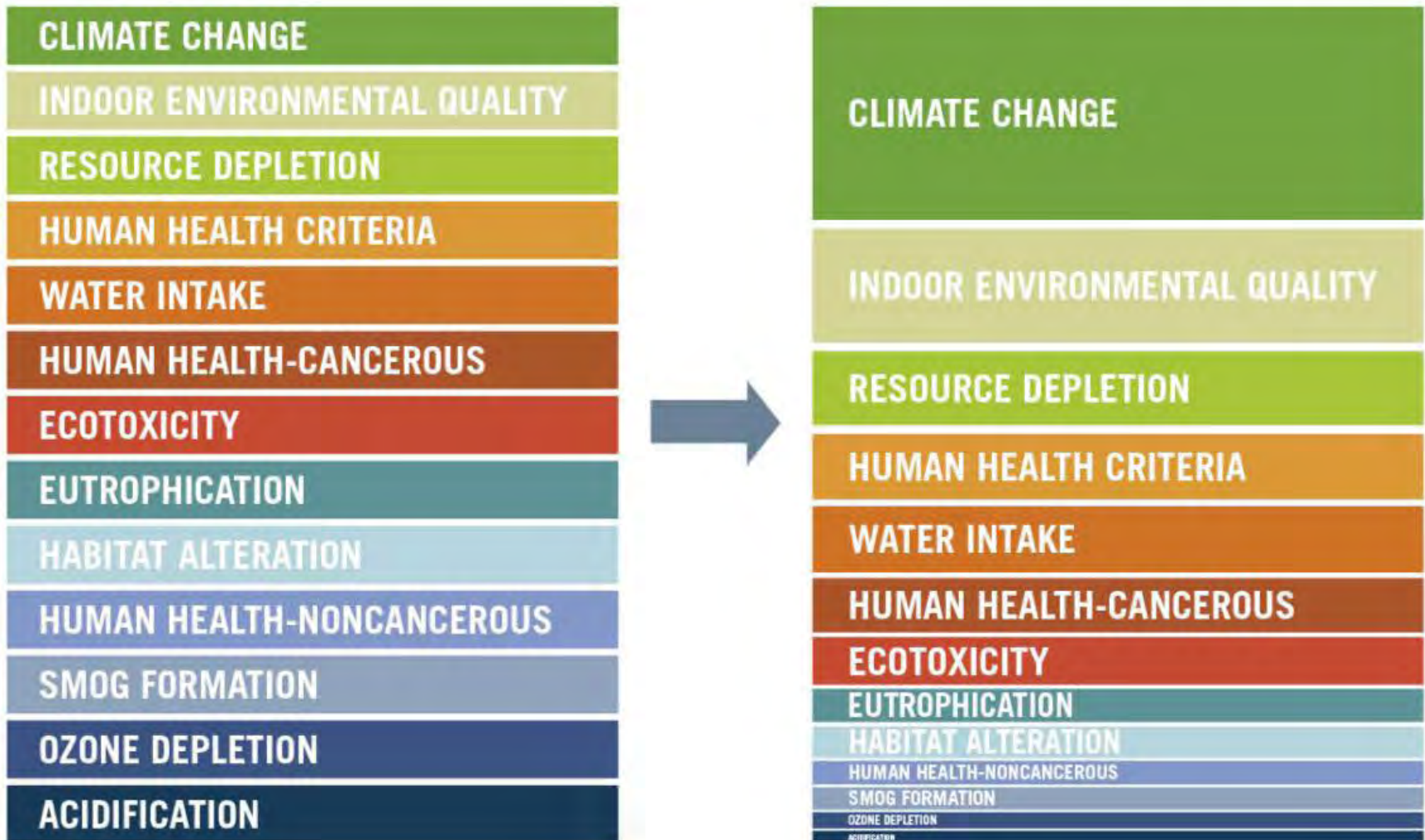
	40	50	60	80	
	CERTIFIED	SILVER	GOLD	PLATINUM	LEED 2009
26	33	39	52		
CERTIFIED	SILVER	GOLD	PLATINUM		LEED for New Construction Version 2.2

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Majors Changes to LEED 2009

- **Credit Weightings**
 - **Credits Have Different Weightings Depending on Their Ability to Impact Different Environmental & Human Health Concerns**
 - **More Points Now Awarded for Strategies That Will Have Greater Positive Impacts on Energy Efficiency & CO2 Reductions**
 - **Each Credit Evaluated Against List of 13 Environmental Impact Categories**
 - **Impact Categories Prioritized & Credits Assigned a Value Based on How They Mitigated Each Impact**

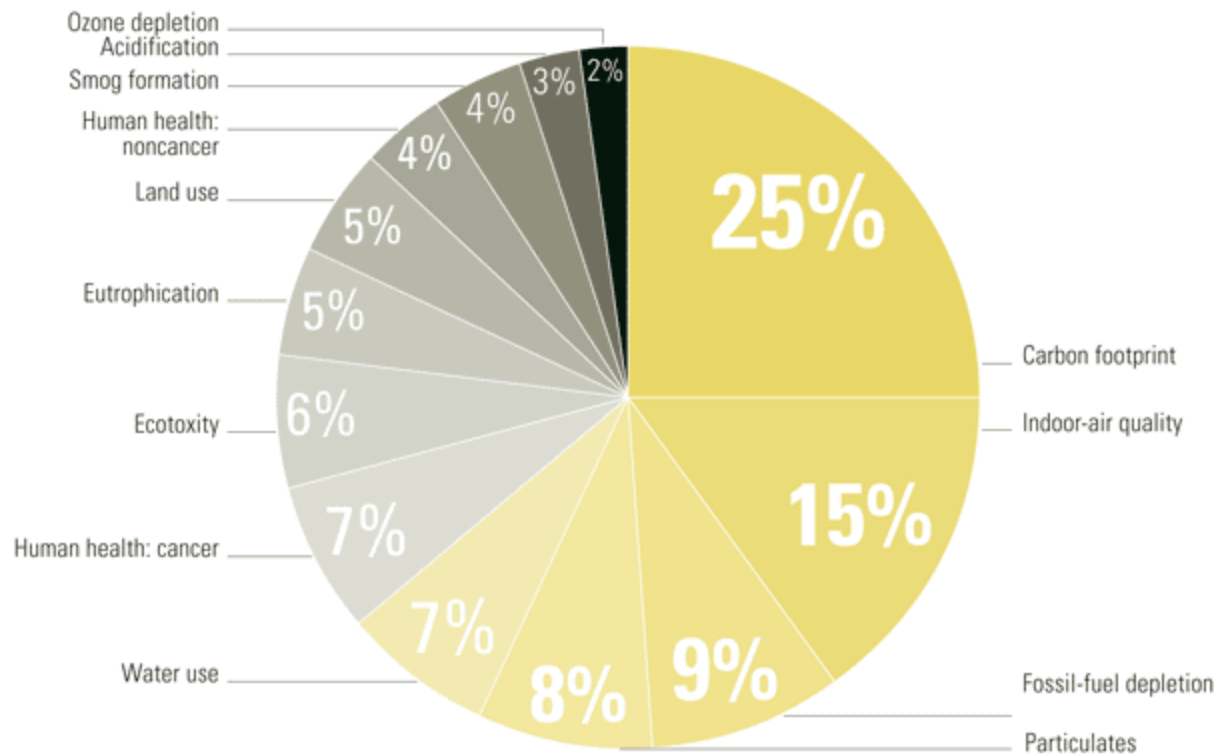
IMPACT CATEGORIES



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Majors Changes to LEED 2009

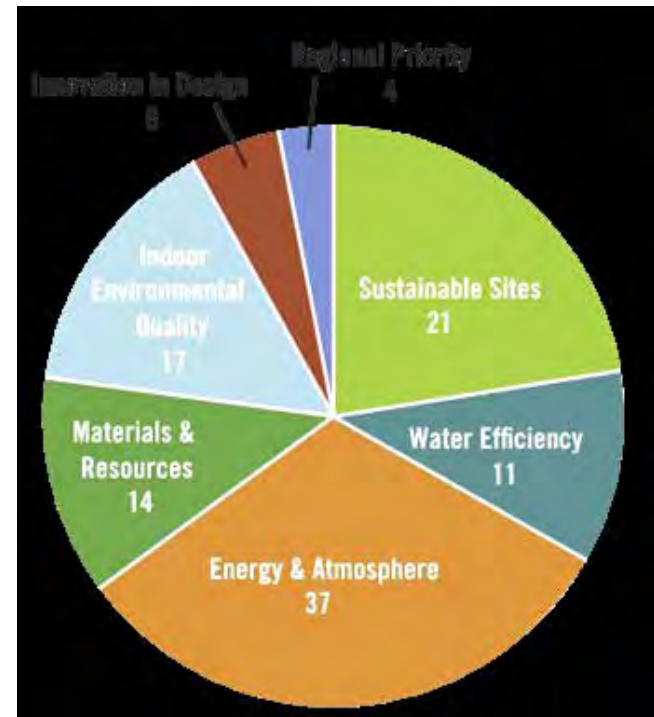
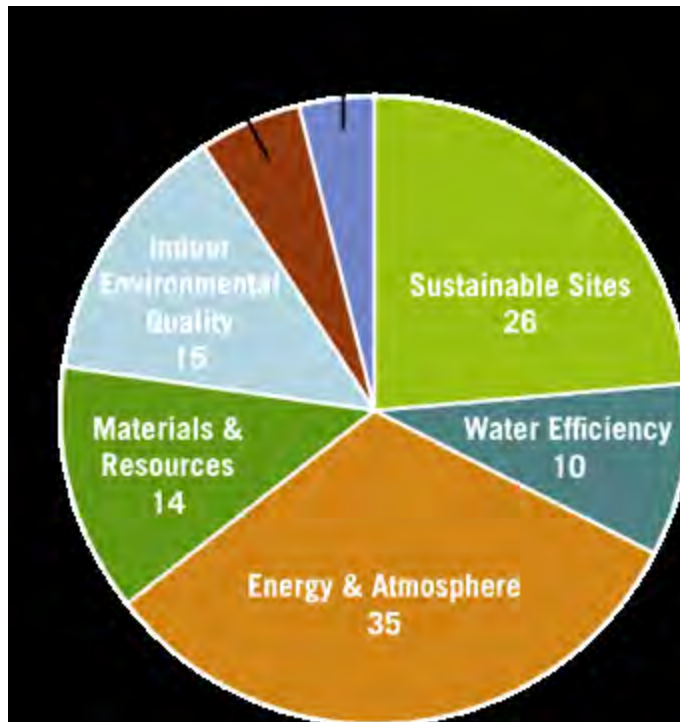
■ Credit Weightings



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Majors Changes to LEED 2009

The Credits Are Intact. The Point Value for Most Credits Has Changed.



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Majors Changes to LEED 2009

■ Credit Weightings

- **Example: Sustainable Sites Credit 4.1 - The Proximity of a Building to Public Transportation Allows For Building Occupants to Utilize Alternative Transportation Methods Which in Turn Has Impacts Associated With Fossil Fuel Depletion, Land Use, Acidification, Ozone Depletion, Smog Formation, Ecotoxicity and Overall Human Health Effects Caused by Reducing Single-Occupant Vehicle Use. It also Affects a Large Component of Building's Environmental Impact - Its Carbon Footprint. LEED 2009 Has Increased the Point Value of This Credit.**



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Majors Changes to LEED 2009

- **Regionalization**
 - **USGBC's Regional Council, Chapters & Affiliates Identified Regionally Specific Environmental Issues**
 - **For a Project's Specific Location, Six LEED Credits Have Been Prioritized Because They Address Specific Environmental Issues**
 - **A Project Can Be Awarded Up to Four Extra Points (One Point Per Credit) for Earning Priority Credits**

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Majors Changes to LEED 2009

■ Regionalization



- **Example - Urban Florida:**
- **Sustainable Sites Credit 5.2, Material & Resource Credit 1.1, Water Efficiency Credit 2, Energy & Atmosphere Credit 1, Material & Resource Credit 5, and Indoor Environmental Quality Credit 8.1**
- **To Incentivize (Among Other Things) Decreased Reliance on Fossil Fuels, Reuse of Existing Building Stock, Decreased Reliance on Insufficient Municipal Wastewater Plants, and Utilization of Abundant Local Sunshine.**

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Understand LEED Minimum Program Requirements Required to Achieve Certification

The New LEED® 2009 Update

Minimum Program Requirements (MPRs)

- **Must Comply With Environmental Laws**

Applies to NC, Core & Shell, Schools, CI

- **Applies to Project Building or Space & Other Real Property Within LEED Project Boundary**
- **Federal, State, Local Building-Related Laws & Regulations in Project Location**
- **Applicable Date - Start of Schematic Design Until Date of Certificate of Occupancy**

The New LEED® 2009 Update

Minimum Program Requirements (MPRs)

- **Must Comply With Environmental Laws**

Also Applies to Existing Buildings: O&M

- **Applies to Project Building & Other Real Property Within LEED Project Boundary, Any Project Work, & Normal Building Operations Within Boundary**
- **Federal, State, Local Building-Related Laws & Regulations in Project Location**
- **Applicable Date - Start of Project's First LEED-EB: O&M Performance Period Through Expiration Date of LEED Certification**

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Minimum Program Requirements (MPRs)

- **Must Be Complete, Permanent Building or Space**

All Rating Systems

- **Project Must Be Designed for, Constructed on, & Operated on a Permanent Location on Already Existing Land**
- **No Building or Space That is Designed to Move May Pursue LEED Certification**

The New LEED® 2009 Update

Minimum Program Requirements (MPRs)

- **Must Be a Complete, Permanent Building or Space**

NC, Core & Shell, Schools

- **Must Include New, Ground-up Design & Construction, or Major Renovation, of at Least One Building In Its Entirety**
- **Construction Prerequisites & Credits Cannot Be Submitted for Review Until Substantial Completion Has Occurred**

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Minimum Program Requirements (MPRs)

- **Must Be a Complete, Permanent Building or Space**

Existing Buildings: O&M

- **Must Include at Least One Existing Building In Its Entirety**

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Minimum Program Requirements (MPRs)

- **Must Use A Reasonable Site Boundary**
NC, Core & Shell, Schools, and
Existing Buildings: O&M
 - **Must Include All Contiguous Land Associated With & Supporting Normal Building Operations for LEED Project Building, Including All Land That Was or Will Be Disturbed for Purpose of Undertaking LEED Project**
 - **Boundary May Not Include Land Owned By a Party Other Than That Which Owns LEED Project Unless That Land Is Associated With LEED Project**

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Minimum Program Requirements (MPRs)

- **Must Use A Reasonable Site Boundary**
NC, Core & Shell, Schools, and
Existing Buildings: O&M
 - **LEED Projects Located On a Campus Must Have Project Boundaries Such That If All Buildings On Campus Become LEED Certified, Then 100% of Gross Land Area On Campus Would Be Included Within a LEED Boundary**
 - **If This Requirement Conflicts With Minimum Building Area to Site Area Ratio Then Ratio Takes Precedence**

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Minimum Program Requirements (MPRs)

- **Must Use A Reasonable Site Boundary**
NC, Core & Shell, Schools, and
Existing Buildings: O&M
 - **Any Given Parcel of Real Property May Only Be**
Attributed to a Single LEED Project Building
 - **Gerrymandering of a LEED Project Boundary Is**
Prohibited
 - **The Boundary May Not Unreasonably Exclude**
Sections of Land to Create Boundaries in
Unreasonable Shapes for Sole Purpose of
Complying With Prerequisite or Credit

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Minimum Program Requirements (MPRs)

- **Must Use A Reasonable Site Boundary**
Commercial Interiors
 - **Any Land That Was or Will Be Disturbed for the Purpose of Undertaking the LEED Project Must Be Included Within LEED Project Boundary**

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Minimum Program Requirements (MPRs)

- **Must Comply With Minimum Floor Area Requirements**

NC, Core & Shell, Schools,

Existing Buildings: O&M

- **LEED Project Must Include Minimum of 1,000 Square Feet of Gross Floor Area**

Commercial Interiors

- **LEED Project Must Include Minimum of 250 Square Feet of Gross Floor Area**

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Minimum Program Requirements (MPRs)

- **Must Comply With Minimum Occupancy Rates
NC, Core & Shell, Schools,
Commercial Interiors**
 - **LEED Project Must Serve One or More Full Time Equivalent (FTE) Occupants Calculated As An Annual Average In Order To use LEED In Its Entirety**
 - **If Project Serves Less Than One Annualized FTE Optional Credits From Indoor Environmental Quality Category May Not Be Earned**

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Minimum Program Requirements (MPRs)

- **Must Comply With Minimum Occupancy Rates**

 - Existing Buildings: O&M**

 - **Project Must Serve One or More Full Time Equivalent (FTE) Occupants Calculated As An Annual Average In Order To use LEED In Its Entirety**
 - **If Project Serves Less Than One Annualized FTE Optional Credits From Indoor Environmental Quality Category May Not Be Earned**
 - **Project Must Be In State of Typical Physical Occupancy & All Building Systems Must Be Operating at a Capacity Required to Serve Current Occupants**

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Minimum Program Requirements (MPRs)

- **Must Commit to Sharing Whole-Building Energy & Water Usage Data**
 - **All Certified Projects Must Commit to Share With USGBC or GBCI All Available Actual Whole-Project Energy & Water Usage Data For a Period of Least Five Years**
 - **Period Starts on Date That Project Begins Typical Physical Occupancy Under NC, Core & Shell, Schools, or CI**
 - **Period Starts on Date That Building is Awarded Certification Under EB: O&M**

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Minimum Program Requirements (MPRs)

- **Must Comply With Minimum Building Area to Site Area Ratio**
 - **Gross Floor Area of Project Building Must Be No Less Than Two Percent of Gross Land Area Within LEED Project Boundary**

The New LEED® 2009 Update

Changes to LEED-Online

The New LEED® 2009 Update

Changes to LEED Online

- **Faster and Smarter**
- **Provides Better User Experience**
- **New Functionality**
- **Improved Support for Certification Review & Submittals**
- **Access LEED Online Version 3 at www.GBCI.org**

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Changes to LEED Online

- **New Functionality**
 - **User Who Is Team Member on More Than One Registered LEED Project Can Now Sort, View & Group Their Projects According to Various Project Traits**
 - **Improved Team Member Administration for Adding Team Roles, Assigning Them to Team Members, & Making Credit Assignments More Flexible**
 - **Status Indicators and Timeline – System Displays All Steps in Review Process Clearly**

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Changes to LEED Online

- **Improved Support for Certification Review**
 - **Beginning-to-End Process Support**
 - **New System Shepherds Project Team Through Entire Certification Process**
 - **Registration Phase Also Includes Help to Decide Which LEED Rating System is Best-Suited for Project**

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Changes to LEED Online

- **Improved Support for Certification Review**
 - **Improved Mid-Stream Communication**
 - **During LEED Review, Clarification Page Allows LEED Reviewer to Contact Project Team If Any Minor Clarifications Are Needed to Complete The Review**
 - **Data Linkages**
 - **Automatic Data Checks**
 - **Progressive, Context-based Disclosure of Content**

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Changes to LEED Online

- **Improved Support for Certification Review**
 - **Data Linkages**
 - **Data Which Is Shared Among Several Credits, Such as Building's Gross Floor Area, Is Filled In Automatically in All Appropriate Places After User Enters It First Time**
 - **Saves Time & Ensures Project-wide Consistency**
 - **Override Options Are Available If Required**
 - **Automatic Data Checks**
 - **Progressive, Context-based Disclosure of Content**

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Changes to LEED Online

- **Improved Support for Certification Review**
 - **Automatic Data Checks**
 - **New System Alerts Users When Data Is Incomplete**
 - **User Has Opportunity to Correct Error Before Submitting Application**
 - **Will Speed Up Review Process & Cut Down on Errors**
 - **Progressive, Context-based Disclosure of Content**

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Changes to LEED Online

- **Improved Support for Certification Review**
 - **Progressive, Context-based Disclosure of Content**
 - **Many LEED Submittal Templates Have Multiple Options for Completing Form**
 - **User Has to Choose & Complete Only One**
 - **Once An Option Has Been Chosen Only Those Data Fields on the Form**
 - **Full Content Is Still Available for Viewing at User's Option**

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The screenshot displays the LEED ONLINE website interface. At the top left is the U.S. Green Building Council (USGBC) logo and the text "LEED® ONLINE". To the right is a login section with "E-mail" and "Password" input fields, a "Remember E-mail" checkbox, a "Forgot Password?" link, and a green "Login" button. The main content area features a dark background with the heading "CO2 Emissions Reduction" and a paragraph: "The 50% CO2 reduction goal – All new commercial LEED projects are required to reduce CO2 emissions by 50% when compared to current emission levels." To the right of this text is a large image of wind turbines silhouetted against a bright orange sunset sky. At the bottom of the page, there is a navigation bar with four links: "Get Started", "What's New", "Learn More", and "Other Links".

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The screenshot shows the LEED ONLINE web application interface. At the top, there is a navigation bar with the LEED ONLINE logo, user information (Ross Spiegel | Log Off), and various links (Your Account, Help, Feedback, Release Notes, Legal, CBC, USGBC, copyright © 2009 USGBC). Below the navigation bar, there are tabs for My Projects, My Archived, Register New Project, and Project Transfer. The main content area displays the project name "Glastonbury Elementary Magnet School" and its location "Glastonbury CT 06088 US | Registered 12/28/2008". It also shows the project status "D and C Preliminary Application" and a "Refresh" button. On the right, the Project ID (1000008430) and Access ID (2757710026141549) are displayed, along with the Project Administrator's name (Ross Spiegel). Below this, there is a navigation menu with tabs for Overview, Scorecard, Timeline, Team Administration, Registration/Design, Clarifications, and Messages. The main content area is divided into two sections: "Action Items" and "Credit Summary". The "Action Items" section contains instructions for building the credit scorecard, documenting credit compliance, marking credits complete, and submitting for review. The "Credit Summary" section features a table with columns for Credits, Attempted, Awarded, Pending, and Denied. Below the table, there is a "Certification Level" section.

LEED ONLINE

My Projects My Archived Register New Project Project Transfer

Glastonbury Elementary Magnet School

Glastonbury CT 06088 US | Registered 12/28/2008

D and C Preliminary Application

Refresh

Project ID 1000008430 | Access ID 2757710026141549

Project Administrator: Ross Spiegel

Overview Scorecard Timeline Team Administration Registration/Design Clarifications Messages

Action Items

Status: This project is in Design and Construction preliminary application.

Build credit scorecard: To add or remove credits to the credit scorecard, the Project Administrator and/or project manager must click the 'Add/Remove Credits' button in the Scorecard tab. All prerequisites and selected credits appear in the Scorecard. Project Administrators and/or project managers have access to update forms but other project team members must be assigned to the credits or prerequisites to access and edit forms.

Document credit compliance: Click on the hyperlinked credit name of assigned credit(s) in the Scorecard to access the credit page and enter/upload information.

Mark credits complete: When satisfied with credit documentation, select the 'Credit Complete' drop-down option on the left side of the form, in the Credit Information tab, then click 'Save Status' button. Credits may also be marked as 'In Progress' if credit is not yet complete.

Submit for review: (These instructions will appear once a credit or prerequisite has been marked as complete in the preliminary application)

Credit Summary

Credits	Attempted	Awarded	Pending	Denied

Certification Level

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The screenshot shows the LEED ONLINE web application interface. At the top, there is a navigation bar with the LEED logo and 'LEED ONLINE' text. The user is logged in as 'Ross Spiegel' and can access 'My Projects', 'My Archives', 'Register New Project', and 'Project Transfer'. The main content area is titled 'Glastonbury Elementary Magnet School' and shows project details: 'Glastonbury CT 06083 US | Registered 12/23/2009', 'D and C Preliminary Application', 'Project ID 1000008430 | Access ID 2757710026141549', and 'Project Administrator: Ross Spiegel'. Below this, there are tabs for 'Overview', 'Scorecard', 'Timeline', 'Team Administration', 'Registration Details', 'Clarifications', and 'Messages'. The 'Scorecard' tab is active, showing a summary of points: 'Total Possible Points: 110', 'Certified: 40-49', 'Silver: 50-59', 'Gold: 60-79', 'Platinum: 80+'. It also shows 'Total Credits Attempted: 14', 'Points Possible: 0', 'Points Attempted: 0', 'Points Awarded: 0', 'Points Denied: 0', and 'Points Pending: 0'. A legend indicates that green checkmarks represent 'Complete' and yellow exclamation marks represent 'RP Achieved'. A table titled 'Project Information Forms' lists four forms: 'Minimum Program Requirements', 'Project Summary Details', 'Occupant and Usage Data', and 'Schedule and Overview Documents'. Each form is marked as 'Attempted' (Y) and 'Awarded' (-). The 'Assignee' for all forms is 'Ross Spiegel'.

Project Information Forms

Cat #	d/c	RP	Credit Name	Attempted	Awarded	Pending	Denied	Status	Changed	Assignee
PI	F1		Minimum Program Requirements	Y	-	-	-	-	N	Ross Spiegel
PI	F2		Project Summary Details	Y	-	-	-	-	N	Assign
PI	F3		Occupant and Usage Data	Y	-	-	-	-	N	Assign
PI	F4		Schedule and Overview Documents	Y	-	-	-	-	N	Assign

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Ross Spiegel | [Log Off](#) Your Account | [Help](#) | [Feedback](#) | [Release Notes](#) | [Legal](#)

LEED ONLINE™ [My Projects](#) | [My Archives](#) | [Register New Project](#) | [Project Transfer](#)

[Projects](#) | [Blocks](#) | [Pending Invitations](#) | [Search](#)

Glastonbury Elementary Magnet School

Glastonbury CT 06033 US | Registered 12/23/2009

D and C Preliminary Application P

[Refresh](#)

[Overview](#) | [Scorecard](#) | [Timeline](#) | **[Team Administration](#)** | [Registration Details](#) | [Clarifications](#) | [Messages](#) | [C](#)

Certification Body Information

Your project has been assigned to [Det Norske Veritas Certification, Inc.](#)

[Add Team Members](#) | [Manage Roles](#) | [Credit Assignment](#) | [Invited Members](#)

Project Team Members

Full Name	Email Address	Organization	Credits	L.P. ?	Project Role
Ross Spiegel	rspiegel@ftae.com	THE CONSTRUCTION SPE	[C]	Yes	
Rick Camara	rcamara@ftae.com	FLETCHER THOMPSON	[C]	No	HVAC Engineer

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Additional Reporting Requirements Incorporated Into LEED 2009

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Additional Reporting Requirements

- **Owners Must Submit Operational Performance Data on a Recurring Basis as Part of Certification Process for a Period of Five Years**
- **Performance Data Covers Energy and Water Usage**
- **USGBC Has the Right to Decertify Projects That Do Not Comply or Do Not Meet Performance Requirements**

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Additional Reporting Requirements

- **Close Gap Between Energy Modeling Done During Design & Actual Daily Building Operations**
- **Performance Data Gathered Will Inform Future Versions of LEED**
- **Will Drive Higher Building Performance**
- **Will Reveal External Forces Such as Occupant Behavior or Unanticipated Building Usage Patterns**

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Additional Reporting Requirements

- **Compliance Demonstrated In Three Ways**
 - **Recertify Project on Two-Year Cycle Using LEED for Existing Buildings: O&M**
 - **Provide Energy & Waste Usage Data on an On-going Basis Annually**
 - **Sign a Release Authorizing USGBC to Access Building's Energy & Water Usage Data Directly From Building's Utility Provider**

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Additional Reporting Requirements

- **Decertification or Revocation of Certification**
 - **If USGBC Determines That Building Does Not Comply with Minimum Program Requirements (MPRs) Cited Earlier Certification Can Be Revoked**

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Resources You Can Use

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Resources You Can Use

- ***Green Building Materials: A Guide To Product Selection And Specification – Second Edition***
Spiegel & Meadows - John Wiley & Sons – 2006
Third Edition Coming November 2010!
- ***Whole Building Design Guide Model Green Specs***
www.wbdg.com
- ***GreenSpec Directory*** – Building Green
www.greenspec.com
- ***Environmental Building News*** - Building Green
www.BuildingGreen.com

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Resources You Can Use

- ***The Integrative Design Guide to Green Building***
7group and Bill Reed / John Wiley & Sons - 2009
- ***The HOK Guidebook to Sustainable Design – 2nd Ed.***
Mendler & Odell / John Wiley & Sons - 2005
- ***Sustainable Commercial Interiors***
Penny Bonda & Katie Sosnowchik / Wiley & Sons-2006
- ***Sustainable Design: Architecture, Planning, & Ecology***
Daniel Williams / John Wiley & Sons - 2007

The New LEED® 2009 Update

Review And Summary

- **Identify Major Changes Incorporated Into LEED 2009**
- **Understand LEED Minimum Program Requirements Required to Achieve Certification**
- **Recognize Changes to LEED-Online**
- **Understand Additional Reporting Requirements Incorporated Into LEED 2009**

The New LEED® 2009 Update

**Thank You For Attending Today and Keep Working
Toward a Greener Future!**

The New LEED® 2009 Update

Questions?

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