

A *Multi-Clean* White Paper

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Your Guide To Clean



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LEED® v4

The newest version of LEED®, and how it relates to green cleaning

"The LEED® (Leadership in Energy and Environmental Design) Green Building Rating System is the nationally accepted benchmark for the design, construction, and operation of high performance green buildings."

LEED® is a registered trademark of the United States Green Building Council.

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Introduction

The term LEED is an acronym for Leadership in Energy and Environmental Design, a certification program for sustainable buildings developed by the U.S. Green Building Council (USGBC). There are five different LEED programs:

- Building Design & Construction (BD+C)
- Interior Design & Construction (ID+C)
- Building Operations & Maintenance (O+M)
- Neighborhood Development (ND)
- HOMES

The LEED O+M program is the one that specifically contains prerequisites and certification credits for facilities that implement green cleaning programs. This white paper specifically discusses and attempts to foster understanding of the green cleaning requirements under the LEED O+M program, and also discusses how the new LEED v4 has changed, in terms of its green cleaning requirements, from LEED v3.

Problem Statement

In June 2013, the USGBC voted to adopt LEED v4 the new update to the green building rating system. This new version has a plethora of changes from the previous version, LEED 2009 or LEED v3, which can lead to confusion about what has changed, what has stayed the same, and how we need to change our approach to becoming LEED-certified.



There is also a significant amount of confusion about how green cleaning fits into the LEED O+M certification process, and how this has changed since LEED v3. Some common misunderstandings common to both new and old versions of LEED include the perception that a cleaning contractor must be LEED-certified, or products used must be LEED-certified. The LEED program does not certify products or contractors, but rather it requires certain protocols to be followed, or requires the use of certain products.

As we examine the specifics of what LEED O+M requires in a green cleaning program, you will see that the program embodies what green cleaning is truly about. That is, green cleaning and LEED go well beyond simply using certain products and equipment. Green cleaning and LEED O+M are about reducing waste, increasing efficiency, and making the indoor environment healthier for building occupants. The intersection of the LEED O+M goals with the drive toward lower costs and increased productivity in businesses provides momentum to sustainability initiatives to many businesses.

Solutions

Making it easier to comply with the green cleaning part of LEED O+M, is a goal that some companies are trying to fully embrace. Providing objective advice and know-how about achieving LEED O+M lends credibility to the company and helps deliver more value. Even if a facility is not considering certification, they may still want to follow the LEED template to fulfill their own sustainability goals. Green cleaning is

not only a required component of LEED certification, it provides many other benefits to facility.

Green Cleaning Earns Certification

Adopting sustainable cleaning practices is required for certification and can also help earn a significant amount of points toward certification.

A Healthier Building

Green cleaning not only reduces environmental impacts, it can reduce indoor air pollution resulting in reduced illness and absenteeism, better test scores, and improved morale.

Save Money

A truly sustainable program, like the ones outlined in LEED programs, reduces waste and improves efficiency and productivity, consequently offering bottom-line savings.

LEED v4: How Does It Work?

LEED O+M is the standard for facilities that want to adopt sustainable practices. Table 1 provides a summary of the 8 parts of LEED O+M that each facility seeking certification must address. A facility can earn points toward certification by addressing items in each of the 8 categories in Table 1.

Table 1. LEED O+M Categories

LEED O+M Category
Location & Transportation
Sustainable Sites
Water Efficiency
Energy & Atmosphere
Material & Resources
Indoor Environmental Quality
Innovation
Regional Priority

Like LEED v3, the category that specifically relates to green cleaning under LEED v4 is Indoor Environmental Quality (IEQ). Also similar to LEED v3, up to 6 points can be earned for adoption of various green cleaning (IEQ) practices. However, LEED v4 has reorganized the IEQ category as well as changed many of the requirements for the credits.

The LEED O+M program also requires, as a prerequisite, that a green cleaning policy should be in place before certification is considered, which places an emphasis on green cleaning in facilities.

LEED O+M Certification Levels

Certified 40 – 49 points

Silver 50 – 59 points

Gold 60 – 79 points

Platinum 80 + points

Implementation

What follows is a brief explanation of each green cleaning credit identified in Table 2, along with any changes from LEED v3 to LEED v4. Resource information to help comply with each credit can be found on page 6.

Green Cleaning Policy

Prerequisite IEQ 3

A written green cleaning policy is a mandatory prerequisite for all LEED O+M certifications. New to LEED v4, there are now two options to complete this prerequisite.

1. A written in-house green cleaning policy – This policy should address the green cleaning credits, strategies, and personnel. It should also cover procedures, materials, and services.
2. Clean the facility using a cleaning service provider certified by Green Seal's GS-42 or ISSA's CIMS-GB

The second option is new to LEED v4 and offers a "shortcut" for those facilities that are already certified by one of these third parties. It is also important to note that the IEQ 3.1 credit from LEED v3, called High-Performance Cleaning Program, has been incorporated into this prerequisite by requiring those using Option 1 to track performance and goals associated with the policy. So although the credit was taken out in LEED v4, the prerequisite was made more stringent, showing that LEED is placing a greater emphasis on green cleaning policies in LEED v4.

Enhanced IAQ Strategies

IEQc2 1 point

This credit is actually worth two points, but only one of these points deals with green cleaning. Addressing entryways, where most dirt and contaminants enter a building, is critical. If these contaminants are spread throughout the building, floor appearance deteriorates faster (surfaces must be cleaned, stripped, and recoated more often). In addition, the contaminants can compromise the overall health of the building. This credit requires permanent entryway systems (walk-off matting) at least 10 feet long, designed to capture dirt and particulates entering the

Table 2. LEED O+M Credits for Green Cleaning

Reference	Description	Points	Comment
IEQ PreReq	Green Cleaning Policy	Req	Written Policy
IEQc2	Enhanced IAQ Strategies	1	Matting/Entryways
IEQc6	Custodial Effectiveness Assessment	1	Score 2.5 or less
IEQc7	Products & Materials	1	75% of purchases
IEQc8	Equipment	1	40% of purchases
IEQc9	Integrated Pest Management	2	Less pesticides
Indoor Environmental Quality (IEQ)		6	

building, similar to LEED v3. New to LEED v4 is the requirement that these systems be cleaned and maintained weekly.

Green Cleaning – Custodial Effectiveness Assessment

IEQc6 1 point

Just like in LEED v3, this credit requires cleaning personnel to perform routine inspections to identify areas of improvement, as well as conduct an annual audit in accordance with APPA Custodial Staffing guidelines. However, while in LEED v3 the passing score in the APPA audit was a 3 or better, the new LEED v4 guideline is a score of 2.5 or better.

Green Cleaning – Products and Materials

IEQc7 1 point

This credit covers the purchase of cleaning chemicals, paper products, and trash bags, and brings one of the more noticeable changes to LEED v4. The previous requirement was 30% of purchases (by cost) had to be green products, either certified by Green Seal or Environmental Choice. The new requirement raises that figure to 75% of purchases that must be green certified. Although this may seem like a drastic increase, LEED v4 has also opened up the

accepted certifications to EPA's Design for the Environment (DfE) products. Facilities can also use ionized or electrolyzed water in place of chemicals, as long as these products have third-party-verified performance data.

Green Cleaning – Equipment

IEQc8 1 point

This credit requires that 40% of all equipment meet LEED's green criteria, doubled from the 20% value of LEED v3. Most of the criteria are the same in both LEED v3 and LEED v4. Vacuums and carpet extractors must have Carpet and Rug Institute's Seal of Approval, floor scrubbers should have on-board chemical metering, be refilled by dilution control systems, or use tap water only, and all equipment should operate at 70 decibels or less. Battery equipment has seen a change in this credit for LEED v4. The gel batteries that were accepted in LEED v3 have been expanded to include absorbent glass mat (AGM) and lithium-ion batteries. Any equipment that does not meet LEED's criteria does not have to be scrapped; they should be phased out and replaced at the end of their lives with products that meet the criteria.

Integrated Pest Management

IEQc9

2 points

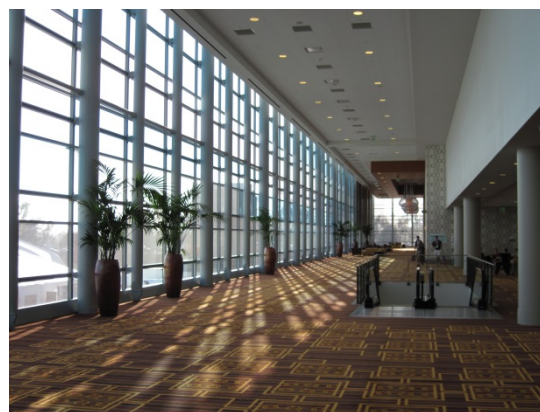
The traditional method of managing rodents, insects, or weeds is to utilize pesticides or herbicides. These are toxic compounds that can and must be used safely. However, reducing their use through prevention management techniques is what Integrated Pest Management is all about. New to LEED v4, this credit now combines indoor and outdoor pest management, and is now worth two points. Much of the criteria are the same from LEED v3 to LEED v4, and are geared toward using non-toxic products and limiting exposure to any pesticides. New to LEED v4 is the requirement that staff have specific identified roles as part of the Integrated Pest Management team.

Summary

Whether or not your organization is applying for LEED O+M certification, the guidelines developed can be an excellent road map for anyone that is serious about green cleaning. Adopting the green cleaning practices outlined in LEED O+M go beyond environmental impacts.

Fostering proactive maintenance methods results in cleaner and healthier facilities that produce less waste, require less chemical usage, without the need to add staff or increase budgets. In fact, a true sustainable cleaning program can actually results in long-run cost-savings.

The changes from LEED v3 to LEED v4 are numerous, and many areas have established more stringent requirements, including those of the green cleaning credits. Many facilities



will need to strengthen their green cleaning programs to comply. However, pursuing the green cleaning credits can be a cost-effective and uncomplicated way to help earn certification. While it may be a challenge, LEED v4 will prepare facilities to achieve higher levels of building performance and positive environmental outcomes.

Resources

- USGBC Website: This site gives advice on where to begin, and reviews all credits for LEED O+M
 - [LEED Certification](#)
 - [LEED O+M Credit Library](#)
- APPA: www.appa.org
- Integrated Pest Management: The EPA's resource site for IPM
 - [Integrated Pest Management Principles](#)
- Cleanlink Article: ["Breaking Down LEED v4 Revisions"](#)
- Multi-Clean: The company offers a variety of resources including a green cleaning website and hosts an informative blog on cleaning issues
 - Web: www.multi-clean.com
 - Blog: blog.multi-clean.com