

LEED AND WATER EFFICIENCY CREDITS



[LEED](#) (Leadership in Energy and Environmental Design) is one of the more well-known green building certifications in the United States. A LEED-certified building meets stringent sustainability requirements in several different categories. As expressed in the tagline, “Better buildings are our legacy,” the LEED program seeks to encourage sustainable practices in the way that buildings are planned, constructed, maintained and operated. LEED certification is overseen by the [U.S. Green Building Council \(USGBC\)](#).

LEED GOALS

According to the USGBC, the goals for any LEED project are to:

- Enhance individual human health and well-being,
- Protect and restore water resources,
- Protect, enhance and restore biodiversity and ecosystem services,

- Promote sustainable and regenerative material resources cycles,
- Reverse contribution to global climate change,
- Build a greener economy,
- Enhance social equity, environmental justice, and community quality of life.

Why would you want a LEED-certified building or project?

Businesses and homeowners have various reasons for seeking LEED certification. A few of the popular reasons include:

Sustainability - Many companies are making sustainability a core part of their business plan or long-term goals. A green building is a way to demonstrate progress towards those goals.

Government Incentives - Some cities or states offer incentives for green building practices. For example, Fannie Mae offers [lower interest rates](#) to multifamily properties with a LEED certification.

Long-Term Savings - More efficient buildings and homes reduce operating costs: lower energy bills, lower water bills. Long-term savings often offset the costs of initial investments.

Public Relations - The ability of companies to report on positive environmental practices to the press or in annual reports can be very powerful. Adobe, for example, has received [positive press coverage](#) for its LEED certifications in multiple buildings.

Real Estate Profitability - A business case study examining the San Diego real estate market showed that the overall vacancy rate for green buildings was four percent lower than for non-green properties—11.7 percent, compared to 15.7 percent. The analysis also showed that LEED-certified buildings also routinely commanded the highest rents. ([USGBC, The Business Case for Green Building](#)).

Happier Employees - LEED-certified buildings are often built with features that enhance the comfort of humans in the building, such as more open spaces, large windows and thoughtfully located sites. As [study after study](#) has shown, happy employees are more productive employees.

LEED certification demonstrates your organization's commitment to being a leader in sustainability and declares your commitment to excellence in operations, maintenance and construction. Understanding how LEED certification works involves calculating and weighting points across nine different categories.

NINE CATEGORIES OF LEED POINTS

The U.S. Green Building Council has created a point system to measure whether a building meets goals for a LEED project. To receive certification, a building has to meet minimum requirements in a variety of areas; then gain points in categories that are in line with that project's needs. Points are awarded for specific achievements in the following areas. (All definitions courtesy of the [USGBC's LEED Credit Library](#)).

NINE CATEGORIES OF LEED CREDITS:

1. Location & Transportation

This category rewards thoughtful decisions about building location, with credits that encourage compact development, alternative transportation, and connection with amenities such as restaurants and parks.

2. Sustainable Sites

The Sustainable Sites category focuses on the environment surrounding the building,



awarding credits for projects that emphasize the vital relationships among buildings, ecosystems, and ecosystem services. It focuses on restoring project site elements, integrating the site with local and regional ecosystems, and preserving the biodiversity that natural systems rely on.

3. Water Efficiency

The Water Efficiency section addresses water holistically, looking at indoor use, outdoor use, specialized uses, and metering. The section is based on an “efficiency first” approach to water conservation.

4. Energy & Atmosphere

The Energy and Atmosphere category approaches energy from a holistic perspective, addressing energy use reduction, energy-efficient design strategies, and renewable energy sources.

5. Material & Resources

The Materials and Resources credit category focuses on minimizing the embodied energy and other impacts associated with the extraction, processing, transport, maintenance, and disposal of building materials. The requirements are designed to support a life-cycle approach that improves performance and promotes resource efficiency.

6. Indoor Environmental Quality

The Indoor Environmental Quality category rewards decisions made by

project teams about indoor air quality and thermal, visual, and acoustic comfort. Green buildings with good indoor environmental quality protect the health and comfort of building occupants.

7. Innovation

Sustainable design strategies and measures are constantly evolving and improving. New technologies are continually introduced to the marketplace, and up-to-date scientific research influences building design strategies. The purpose of this LEED category is to recognize projects for innovative building features and sustainable building practices and strategies.

8. Regional Priority

Because some environmental issues are particular to a locale, volunteers from USGBC chapters and the LEED International Roundtable have identified distinct environmental priorities within their areas and the credits that address those issues. These Regional Priority credits encourage project teams to focus on their local environmental priorities.

9. Integrative Process

Beginning in pre-design and continuing throughout the design phases, identify and use opportunities to achieve synergies across disciplines and building systems

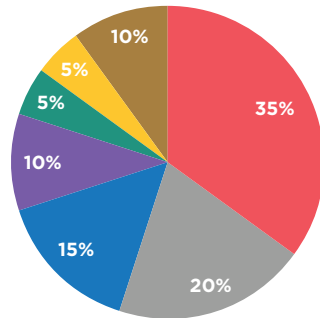
Depending on the type of project that you are looking to certify,



different options are available for gaining points in each of these areas.

WEIGHTING OF LEED POINTS

- 35% Climate Change**
- 20% Human Health**
- 15% Water Resources**
- 10% Biodiversity**
- 5% Green Economy**
- 5% Community**
- 10% Natural Resources**



In addition to categories, LEED points are weighted according to area of impact. The top three weightings are climate change, human health, and water resources. The U.S. Green Building Council has [more details on the weightings](#). The prominence of the water weighting shows the importance of having a water plan as a part of your LEED certification.

Earning LEED Credit for Water Efficiency

In their [overview of the Water Efficiency \(WE\) credit](#), the USGBC offers the following description:

The Water Efficiency (WE) section addresses water holistically, looking at indoor use, outdoor use, specialized uses, and metering. The section is based on an “efficiency first” approach to water conservation.

The USGBC is looking at a building’s overall water efficiency. It encourages water conservation, water quality protection, and the protection or restoration of water regimes and natural hydrological cycles. Depending on the type of building that you manage, up to 12 LEED Water Efficiency points are available, with possible additional points if water issues are considered a priority in your region.

Following are the areas that LEED takes into consideration and some basic information about each section*. Buildings must first fulfill certain prerequisites – basic levels of efficiency that USGBC expects for any green building (reasonably efficient fixtures and appliances, for example). Points are then awarded for water use efficiency over and above those prerequisites.

Indoor Water Use



Points related to indoor water use are allocated for efficiency in fixtures, appliances, and processes. Examples of items that contribute to the indoor water use credit include: decreasing overall indoor water use beyond a given baseline, efficient cooling towers, [effective metering](#) (and therefore effective monitoring) of water systems.

*Note that various types of buildings are eligible for different points in the LEED system. This overview does not cover all of the ways in which LEED WE credits can be earned. For more detailed information related to your project, visit usgbc.org/LEED.



Irrigation Water



Many facilities use significantly more water than they need outdoors. Banyan Water often sees properties where landscape health can easily be maintained with less than half of the irrigation water currently being used. Recognizing this, the USGBC focuses credits for outdoor water use on intelligent ways to calculate and maintain reasonable levels of water use for irrigation.

Some of the methods that they endorse include:





- Creating landscapes that require no irrigation beyond the water that they need to become established,
- Calculating reasonable “water budgets” for landscapes using the

[EPA's WaterSense Water Budget Tool](#), and reducing use beyond the baseline that the EPA provides,

- Metering outdoor water use and demonstrating significant reduction from an established baseline.

The number of points available in each area and the level of importance of each of these efforts vary significantly depending on the type of building that is being certified. An existing retail building, for example, may be eligible to earn Water Efficiency credits in a very different way than a new multifamily housing development.

The chart below summarizes Banyan Water's research on the different water credits available for different types of buildings.

Water Efficiency LEED Points & Requirements						
	Existing Construction ¹	New Construction	Remodel ⁶	Neighborhoods	Residential	
	Buildings, Schools, Retail, Hospitality, Distribution Centers	Schools, Retail, Data Centers, Warehouse, Hospitality & Healthcare	Commercial Interiors, Retail, Hospitality		Homes, low & mid-rise multifamily units ⁷	
 INDOOR WATER USE REDUCTION	Required	Meet water use targets based on fixtures installed.				Meet water pressure requirements ² and no detectable water leaks
	Eligible Points for % Reduction Below Baseline	1 point - 10% 2 points - 15% 3 points - 20% 4 points - 25% 5 points - 30%	1 point - 10% 2 points - 15% 3 points - 20% 4 points - 25%	1 point - 25% 2 points - 30% 3 points - 35% 4 points - 40% 5 points - 45% 6 points - 50%	2 points - 25% 4 points - 35% 6 points - 40% 8 points - 45% 10 points - 50% 11-12 points - 50% ³	2 points - faucets meet water use targets 2 points - showerheads meet water use targets 1 point - toilets meet water use targets 1 point - clothes washers meet water use targets
 BUILDING-LEVEL WATER METERING	Required	Use water meters to measure total potable water use for building and associated grounds		Use water meters to measure total potable water use for building and associated grounds, report results to USGBC		Use water meters to measure total potable water use for building and associated grounds
	Eligible for Points	1 point - monitor two subsystems ⁴ 2 points - monitor four subsystems		1 point - monitor two subsystems ⁴		
 OUTDOOR WATER USE REDUCTION	Required		Use at least 30% less water than baseline or no irrigation			
	Eligible Points for % Reduction Below Baseline	1 point - 30% 2 points - 40%	1 point - 50% 2 points - 100%		1 point - 30% 2 points - 50% 2 points - no irrigation required	1 point - < 60% turf grass and > 25% native or adapted plants 2 points - < 40% turf grass and > 50% native or adapted plants 3 points - < 20% turf grass and > 75% native or adapted plants 4 points - < 5% turf grass and > 75% native or adapted plants
 COOLING TOWER WATER USE		2 points - maintain water quality and < 10 cycles 3 points - maintain water quality and > 10 cycles	2 points - maintain water quality and < 10 cycles 4 points - maintain water quality and > 10 cycles	1 point - maintain water quality and < 10 cycles 2 points - increase water treatment and > 10 cycles		

Source: www.usgbc.org/leed

¹- 6th point not available for schools, retail, hospitality, healthcare
²- additional metering requirements for healthcare facilities (new construction only)
³- 10th and 12th points not available for retail interiors
⁴- multifamily units not subject to water pressure testing
⁵- homes and multifamily units are also eligible to earn points based on a percentage decrease in total water use in lieu of the points outlined above.
⁶- Applies to buildings that are being newly constructed or going through a major renovation; includes New Construction, Core & Shell, Schools, Retail, Hospitality, Data Centers, Warehouses & Distribution Centers, and Healthcare.
⁷- Applies to projects that are a complete interior fit-out; includes Commercial Interiors, Retail and Hospitality

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[Click here to download full chart](#)



Banyan Water and LEED Certification

Beyond LEED certification, you care about saving water for many reasons. LEED certification is a public declaration that conservation is a priority for you. Banyan Water helps its partners conserve water and earn credit towards LEED Certification. Banyan Water Intelligence™ enables you to drastically reduce water use in order to earn LEED points and reduce costs. The areas where Banyan can help you reduce water use and earn LEED points are not limited to, but include:

- Reducing outdoor water use to below-baseline through data-driven watering techniques
- Monitoring indoor water use to meet building-level metering requirements
- Highlighting areas (indoor and outdoor) where water use is unusually high and could easily be reduced
- Monitoring cooling tower water use through flow monitoring technology
- Detecting leaks, including difficult-to-detect slab leaks, that could be keeping you from meeting water-use reduction targets
- Providing a clear picture of where water is going on a property to identify inefficient systems

- Highlighting water-saving opportunities across a property, showing you which are the most important.

Conclusion

Widely recognized as one of the premier green certifications in the U.S. and the world, LEED certification helps building managers to gain recognition, financial benefits, and press coverage for their efforts towards sustainability.

Understanding LEED certification involves delving into a complex collection of rules and points. Becoming familiar with this structure enables you to set goals for your facilities and prepare for conversations with LEED certification consultants.

Water efficiency commands the third most LEED points of all weightings. Prioritize water efficiency and earn those critical points. Gain more than LEED certification. Save money in the process. It's just smart business.

Find more water-related news and information at www.banyanwater.com

