

Glossary

Adapted vegetation and native vegetation

Plants indigenous to a locality (native) or plants that are adapted to the local climate and are not considered invasive species or noxious weeds (adapted); they require limited irrigation following planting, do not require active maintenance such as mowing, and provide habitat value.

Albedo

Synonymous with **solar reflectance**.

Alternative-fuel vehicles

Vehicles that use low-polluting, nongasoline fuels, such as electricity, hydrogen, propane or compressed natural gas, liquid natural gas, methanol, and ethanol. Efficient gas-electric hybrid vehicles are included in this group for LEED purposes.

Baseline irrigation water use

The amount of water that would be used by a typical method of irrigation for the region.

Bicycle racks

Outdoor bicycle racks, bicycle lockers, and indoor bicycle storage rooms.

Biofuel-based electrical systems

Electrical power systems that run on renewable fuels derived from organic materials, such as wood by-products and agricultural waste. For purposes of LEED, biofuels include untreated wood waste (e.g., mill residues), agricultural crops or waste, animal waste and other organic waste, and landfill gas.

Biological control

The use of chemical or physical water treatments to inhibit bacterial growth in cooling towers.

Biomass

Plant material from trees, grasses, or crops that can be converted to heat energy to produce electricity.

Blackwater

Does not have a single definition that is accepted nationwide. Wastewater from toilets and urinals is, however, always considered blackwater. Wastewater from kitchen sinks (perhaps differentiated by the use of a garbage disposal), showers, or bathtubs may be considered blackwater by state or local codes. Project teams should comply with the blackwater definition as established by the authority having jurisdiction in their areas.

Bleed-off or blowdown

The release of built-up solids in a cooling tower, accomplished by removing a portion of the concentrated recirculating water that carries dissolved solids.

Bleed-off rate

The frequency with which the dissolved minerals and dirt are removed from the cooling tower. It varies depending on the mineral content and scaling tendency of the entering water.

Building automation system (BAS)

A computer-based monitoring system that coordinates, organizes, and optimizes building control subsystems, including lighting and equipment scheduling, and alarm reporting.

Building Engineer

A qualified engineering professional with relevant and sufficient expertise who oversees and is responsible for the operation and maintenance of mechanical, electrical and plumbing systems in the project building.

Building footprint

The area of the site occupied by the building structure, not including parking lots, landscapes, and other nonbuilding facilities.

Building Operating Plan

A general documentation summarizing the intended operation of each base building system described in the systems narrative; the building operating plan may also be known as "Owner's Operating Requirements" or similar. The operating plan includes the time-of-day schedules for each system for each of the eight day types (Monday to Sunday plus holidays), the mode of operation for each system when it is running (occupied vs. unoccupied; day vs. night, etc.), and the desired indoor conditions or setpoints for each schedule or mode. The operating plan accounts for any differences in needs or desired conditions for different portions of the project building, as well as any seasonal variations in operations patterns. The plan accounts for all the monitored space conditions used to control the base systems, i.e., air temperature, relative humidity, occupancy, light level, CO₂ levels, room pressurization, duct static pressure, etc.

Carbon dioxide (CO₂) levels

An indicator of ventilation effectiveness inside buildings. CO₂ concentrations greater than 530 ppm above outdoor CO₂ conditions generally indicate inadequate ventilation. Absolute concentrations of CO₂ greater than 800 to 1,000 ppm generally indicate poor air quality for breathing.

Carpool

An arrangement in which two or more people share a vehicle for transportation.

Chain-of-custody

A tracking procedure for documenting the status of a product from the point of harvest or extraction to the ultimate consumer end use, including all successive stages of processing, transformation, manufacturing, and distribution.

Chemical runoff

Water that transports chemicals from the building landscape, as well as surrounding streets and parking lots, to rivers and lakes. Runoff chemicals may include gasoline, oil, antifreeze, and salts.

Chemical treatment

The use of biocidal, conditioning, dispersant, and scale-inhibiting chemicals to control biological growth, scale, and corrosion in cooling towers. Alternatives to conventional chemical treatment include ozonation, ionization, and UV light. Reducing or eliminating chemical treatment through effective alternatives reduces the environmental and human health risks associated with the chemicals used in conventional treatment protocols.

Chlorofluorocarbons (CFCs)

Hydrocarbons that are used as refrigerants and cause depletion of the stratospheric ozone layer.

Churn

The movement of workspaces and people within a space.

Climate change

Refers to any significant change in measures of climate (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer) (U.S. Environmental Protection Agency,

2008).

Comfort criteria

Specific original design conditions that include temperature (air, radiant, and surface), humidity, air speed, outdoor temperature design conditions, outdoor humidity design conditions, clothing (seasonal), and expected activity (ASHRAE 55–2004).

Comingling Recycling

A process of recycling materials that allows consumers to dispose of various materials (such as paper, cardboard, plastic, and metal) in one container that is separate from waste. The recyclable materials are not sorted until they are collected and brought to a sorting facility.

Commissioning cycle

The schedule of activities relating to existing building commissioning, including investigation and analysis phase, implementation phase, and ongoing commissioning.

Composite wood

Composite wood is made from several materials, and **agrifiber products** are products made from agricultural fiber. For this credit, these materials comprise particleboard, medium-density fiberboard (MDF), plywood, oriented-strand board (OSB), wheatboard, strawboard, panel substrates, and door cores.

Composting toilet systems

Dry plumbing fixtures that contain and treat human waste via microbiological processes.

Compressed workweek

Rearrangement of the standard workweek (five consecutive eight-hour days in a week) by increasing the daily hours and decreasing the number of days in the work cycle. For example, instead of working eight-hour days Monday through Friday, employees work 10-hour days for four days per week, or nine-hour days for nine of 10 consecutive days.

Concentrate

A product that must be diluted by at least eight parts by volume water (1:8 dilution ratio) prior to its intended use (Green Seal GS-37).

Concentration ratio or cycles of concentration

The ratio of the concentration of dissolved solids in the recirculating water to the concentration found in the entering makeup water. Higher cycles of concentration require a lower bleed-off rate, though increasing the cycles of concentration above a certain point leads to scaling, and water savings diminish after a certain level. The “cycle” refers to the number of times dissolved minerals in the water are concentrated compared with makeup water, not to water flow over the tower or to on-off cycles.

Conductivity meter or EC meter

A device that measures the amount of nutrients and salt in water.

Construction and demolition (C&D) debris

Waste and recyclables generated from construction, renovation, and demolition or deconstruction of preexisting structures.

Construction, demolition, and land clearing (CDL) debris

Includes all construction and demolition debris plus soil, vegetation, and rock from land clearing.

Construction IAQ management plan

Measures to minimize contamination in a specific project building during construction and

describes procedures to flush the building of contaminants prior to occupancy.

Conventional irrigation

Refers to the most common irrigation system used in the region where the building is located. A conventional irrigation system commonly uses pressure to deliver water and distributes it through sprinkler heads above the ground.

Cooling tower

A piece of equipment that uses water to regulate air temperature in a facility by absorbing heat from air-conditioning systems or cooling down hot equipment.

Critical visual tasks

Visual tasks completed by building occupants, includes reading and computer monitor use.

Daylight factor

The ratio of exterior illumination to interior illumination, expressed as a percentage. The variables used to determine the daylight factor include the floor area, window area, window geometry, visible transmittance (T_{vis}), and window height.

Daylight glazing

A vertical window area located 7'6" above the floor. Glazing at this height is the most effective at distributing daylight deep into the interior space.

Daylighting

The controlled admission of natural light into a space through glazing to reduce or eliminate electric lighting. Daylighting creates a stimulating and productive environment for building occupants.

Declarant

A LEED project team member who is technically qualified to verify the content of a LEED credit submittal template, and is authorized by the project administrator to sign the template and upload it to LEED Online. The Declarant must have had a significant degree of responsibility for the credit, such as participation in or oversight of the implementation or verification. The declarant for credits may be restricted or nonrestricted. For example, for Sustainable Sites Credit 4, only the property manager or facility manager may submit verification; for others, any team member, including contractors or consultants, can prepare the submittal documentation.

Densely occupied space

An area with a design occupant density of 25 people or more per 1,000 square feet (40 square feet or less per person).

Density factor (k_d)

A coefficient used in calculating the Landscape Coefficient; it modifies the Evapotranspiration Rate to reflect the water use of a particular plant or group of plants, particularly with reference to the density of the plant material.

Design light output

The light output of lamps at 40% of their useful life.

Development footprint

The area affected by project site activity. Hardscape, access roads, parking lots, nonbuilding facilities, and the building itself are all included in the development footprint.

Drip irrigation

A high-efficiency method in which water is delivered at low pressure through buried mains and

submains. From the submains, water is distributed to the soil from a network of perforated tubes or emitters. Drip irrigation is a type of microirrigation.

Durable goods

Have a useful life of two years or more and are replaced infrequently and/or may require capital program outlays. Examples include furniture, office equipment, appliances, external power adapters, televisions, and audiovisual equipment.

Durable goods waste stream

Durable goods leaving the project building, site, and organization that have fully depreciated and reached the end of their useful lives for normal business operations.

Ecologically appropriate features

Natural, inanimate elements of the landscape (e.g., rocks and water features).

Ecologically appropriate site features

Natural site elements that maintain or restore the ecological integrity of the site. Examples include native or adapted vegetation, waterbodies, exposed rock, unvegetated ground, or other features that are part of the historic natural landscape within the region and provide habitat value.

Ecological restoration

The process of assisting in the recovery and management of ecological integrity, including biodiversity, ecological processes and structures, regional and historical context, and sustainable cultural practices.

Elemental mercury

Pure mercury (rather than a mercury-containing compound), the vapor of which is commonly used in fluorescent and other lamp types.

Emissivity

The ratio of the radiation emitted by a surface to the radiation emitted by a black body at the same temperature.

Energy audit

Identifies how much energy is used in a building for what purposes and identifies opportunities for improving efficiency and reducing costs. The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) uses three levels of energy audits: (I) walk-through analysis, (II) energy survey and analysis, and (III) detailed analysis of capital-intensive modifications (investment-grade audit).

ENERGY STAR® rating

A measure of a building's energy performance compared with buildings with similar characteristics, as determined by use of the ENERGY STAR® Portfolio Manager. A score of 50 represents average building performance.

Environmental attributes of green power

The environmental attributes of green power include the emissions reduction benefits that result from the substitution of renewable energy sources for conventional power sources.

Environmental tobacco smoke (ETS), or secondhand smoke

Consists of airborne particles emitted both directly from cigarettes, pipes, and cigars and indirectly, as exhaled by smokers.

Erosion

The process by which the materials of Earth's surface are loosened, dissolved, or worn away and

transported by natural agents.

Exhaust air

The air removed from a space and discharged outside the building by means of mechanical or natural ventilation systems.

Existing building commissioning or retrocommissioning

Involves developing a building operating plan that identifies current building operating requirements and needs, conducting tests to determine whether the building and fundamental systems are performing optimally in accordance with the plan, and making any necessary repairs or changes.

Evapotranspiration

Water lost through transpiration through plants plus water evaporated from the soil.

Evapotranspiration rate (ET) is the amount of water lost from a vegetated surface in units of water depth. It is expressed in millimeters per unit of time.

Facility alterations and additions

Refers to building work that is done on the existing building. Facility alterations refer to changes made to a building that do not interfere with the original design character of the building, such as replacement flooring, painting, etc. Facility additions are structures added to the original building structure that are subordinate in scale to the main building and typically located to the side or rear of the original structure. An example of an addition would be an extra floor added to the building.

Facility Manager

Belongs to “a profession that encompasses multiple disciplines to ensure functionality of the built environment by integrating people, place, process, and technology” according to the International Facility Management Association (IFMA)

Fairtrade

A product certification system overseen by FLO International designated to allow people to identify products that meet agreed environmental, labor, and development standards.

Food Alliance

A certification that applies to foods from sustainable farms and ranches that produce natural products; ensure quality control and food safety; responsibly manage water, energy resources, and waste; emphasize recycling; provide a safe work environment; and commit to continuous improvement of sustainable practices.

Fuel-efficient vehicles

Vehicles that have achieved a minimum green score of 40 on the American Council for an Energy Efficient Economy annual vehicle-rating guide. See Summary of Referenced Standard in SSc4.1-4.4 for more information.

Full cutoff

Describes a luminaire having a light distribution in which the candela per 1000 lamp lumens does not numerically exceed 25 (2.5%) at or above an angle of 90° above nadir, and 100 (10%) at or above a vertical angle of 80° above nadir. This applies to all lateral angles around the luminaire. (Illuminating Engineering Society of North America.)

Full disclosure

For products that are not formulated with listed suspect carcinogens has two components: (1) disclosure of all ingredients (both hazardous and nonhazardous) that make up 1% or more of the undiluted product and (2) use of concentration ranges for each of the disclosed ingredients. Full disclosure for products that are formulated with listed suspect carcinogens has three components: (1) disclosure of listed suspect carcinogens that make up 0.1% or more of the

undiluted product, (2) disclosure of all remaining ingredients (both hazardous and nonhazardous) that make up 1% or more of the undiluted product, and (3) use of concentration ranges for each of the disclosed ingredients. Suspect carcinogens are those that are listed on authoritative lists (IARC, NTP, or California Proposition 65) for MSDS preparation. Concentration range definitions are available from OSHA or Canada WHMIS Standards.

Full-time equivalent (FTE)

A regular building occupant who spends 40 hours per week in the project building. Part-time or overtime occupants have FTE values based on their hours per week divided by 40. Multiple shifts are included or excluded depending on the intent and requirements of the credit.

Fully shielded

An exterior light fixture that is shielded or constructed so that its light rays project below the horizontal plane passing through the lowest point on the fixture from which light is emitted.

Furniture, fixtures, and equipment

Include all items that are not base building elements, such as lamps, computers and electronics, desks, chairs, and tables.

Geothermal energy

Electricity generated by converting hot water or steam from within Earth.

Geothermal heating systems

A system that uses pipes to transfer heat from underground for heating, cooling and hot water. The system retrieves heat from the Earth during cool months and returns heat in summer months.

Glare

Any excessively bright source of light within the visual field that creates discomfort or loss in visibility.

Glazing factor

The ratio of interior illuminance at a given point on a given plane (usually the work plane) to the exterior illuminance under known overcast sky conditions. LEED uses a simplified approach for its credit compliance calculations. The variables used to determine the daylight factor include the floor area, window area, window geometry, visible transmittance (T_{vis}) and window height.)

Graywater, or gray water

Is defined by the Uniform Plumbing Code (UPC) in its Appendix G, titled "Gray Water Systems for Single-Family Dwellings," as "untreated household waste water which has not come into contact with toilet waste. Gray water includes used water from bathtubs, showers, bathroom wash basins, and water from clothes-washer and laundry tubs. It shall not include waste water from kitchen sinks or dishwashers." The International Plumbing Code (IPC) defines graywater in its Appendix C, titled "Gray Water Recycling Systems," as "waste water discharged from lavatories, bathtubs, showers, clothes washers, and laundry sinks." Some state and local authorities allow kitchen sink wastewater to be included in graywater. State and local codes may differ from the UPC and IPC definitions in other respects as well; project teams must comply with the definitions established by the authority having jurisdiction in their areas.

Green cleaning

The use of cleaning products and practices that have less environmental impact than conventional products and practices.

Groundskeeper

A qualified professional with relevant and sufficient expertise who oversees and is responsible for the establishment and maintenance of landscaping, vegetation, and pest control on the project building's grounds.

Group multi-occupant spaces

Include conference rooms, classrooms, and other indoor spaces used as places of congregation for presentations, training sessions, etc., where workers engage in a common task and share the lighting and temperature controls. Group multi-occupant spaces do not include open office plans that contain individual workstations.

Halons

Substances used in fire-suppression systems and fire extinguishers. These substances deplete the stratospheric ozone layer.

Hardscape

Inanimate elements of the building landscaping, including pavement, roadways, stone walls, concrete paths and sidewalks, and concrete, brick, or tile patios.

Heat island effect

Refers to the absorption of heat by hardscapes, such as dark, nonreflective pavement and buildings, and its radiation to surrounding areas. Particularly in urban areas, other sources may include vehicle exhaust, air-conditioners, and street equipment; reduced airflow from tall buildings and narrow streets exacerbates the effect.

High-efficiency particulate air (HEPA) filters

Filters that remove virtually all (99.97%) 0.3-micron particles.

HVAC systems

Heating, ventilating, and air-conditioning systems used to provide thermal comfort and ventilation.

Hydrochlorofluorocarbons (HCFCs)

Refrigerants that are used in building equipment and cause depletion of the stratospheric ozone layer, but they are less damaging than CFCs.

Hydrofluorocarbons (HFCs)

Refrigerants that do not deplete the stratospheric ozone layer but may have high global warming potential and thus are not environmentally benign.

Hydro energy

Electricity produced from the downhill flow of water from rivers or lakes.

Hydrology

Addresses water occurrence, distribution, movement, and balances in an ecosystem.

Imperviousness

Resistance to penetration by a liquid and is calculated as the percentage of area covered by a paving system that does not allow moisture to soak into the ground.

Impervious surfaces

Promote runoff of precipitation instead of infiltration into the subsurface. The imperviousness or degree of runoff potential can be estimated for different surface materials.

Incinerator

A furnace or container for burning waste materials.

Individual occupant workspaces

Areas where workers use standard workstations to conduct individual tasks. Examples are private offices and open office areas with multiple workers.

Indoor air quality (IAQ)

The nature of air that affects the health and well-being of building occupants.

Infrared emittance

Indicates the ability of a material to shed infrared radiation, whose wavelength is roughly 5 to 40 micrometers. Infrared emittance is measured on a scale of 0 to 1. Most building materials (including glass) are opaque in this part of the spectrum and have an emittance of roughly 0.9. Materials such as clean, bare metals are the most important exceptions to the 0.9 rule: clean, untarnished galvanized steel has low emittance, and aluminum roof coatings have intermediate emittance levels.

Integrated pest management (IPM)

The coordinated use of knowledge about pests, the environment, and pest prevention and control methods to prevent unacceptable levels of pest infestation and damage by the most economical means while minimizing hazards to people, property, and the environment.

Invasive plants

Both indigenous and exotic species that are characteristically adaptable and aggressive, have a high reproductive capacity, and tend to overrun an area. Collectively, they are one of the great threats to biodiversity and ecosystem stability.

Irrigated land

Refers to areas where water is delivered through artificial methods (that is, other than rain). Conventional methods utilize pressure to deliver and distribute water through sprinkler heads above the ground. Efficient methods include drip irrigation, a highly efficient type of microirrigation that delivers water at a low pressure through buried mains and submains of perforated tubes or emitters.

Lamp life

The useful operating life of lamps.

Lamps

Use electricity to produce light in any of several ways: by heating a wire for incandescence, by exciting a gas that produces ultraviolet light from a luminescent material, by generating an arc that emits visible light and some ultraviolet light, or by inducing excitation of mercury through radio frequencies. Light-emitting diodes, packaged as traditional bulbs, also fall under this definition.

Landfills

Waste disposal sites for solid waste from human activities.

Landscape area

Landscape area of the site is the total site area less the building footprint, hardscape area, water bodies, etc.

Landscape coefficient (K_L)

A coefficient used to calculate the evapotranspiration rate; it takes into account the species factor, density factor, and microclimate factor of the area.

Leakage rate

The speed at which an appliance loses refrigerant, measured between refrigerant charges or over 12 months, whichever is shorter. The leakage rate is expressed in terms of the percentage of the appliance's full charge that would be lost over a 12-month period if the rate stabilized. (EPA Clean Air Act, Title VI, Rule 608).

Least toxic chemical pesticide

Any pesticide product for which all active ingredients and known inert ingredients meet the least toxic Tier 3 hazard criteria under the City and County of San Francisco's hazard screening protocol. Least toxic also applies to any pesticide product, other than rodent bait, that is applied in a self-contained, enclosed bait station placed in an inaccessible location, or applied in a gel that is neither visible nor accessible.

LEED Accredited Professionals (AP)

Individuals who have successfully completed the LEED professional accreditation exam.

Legionella

A waterborne bacterium that causes Legionnaire's disease. It grows in slow-moving or still warm water and can be found in plumbing, showerheads, and water storage tanks. Outbreaks of *Legionella* pneumonia have been attributed to evaporative condensers and cooling towers.

Life-cycle assessment

A method used to analyze the environmental aspects and potential impacts associated with a product, process, or service.

Life-cycle costing (LCC)

An accounting methodology to evaluate the economic performance of a product or system over its useful life; it considers the operating costs, maintenance expenses, and other economic factors.

Light pollution

Waste light from building sites that produces glare, is directed upward to the sky, or is directed off the site. Waste light does not increase nighttime safety, utility, or security and needlessly consumes energy and natural resources.

Low-emitting vehicles

Vehicles classified as zero-emission vehicles (ZEVs) by the California Air Resources Board. See Summary of Referenced Standard, above, for more information.

Lumen

A unit of luminous flux equal to the light emitted in a unit solid angle by a uniform point source of one candle intensity.

Makeup water

Water fed into the system to replace what is lost through evaporation, drift, blowdown, or other causes.

Management staff

Employees or contractors involved in operating and maintaining the building and site.

Marine Stewardship Council's Blue Eco-Label

Certification that applies to products that meet the MSC principles and criteria for sustainable fishing, including sustainable harvest of the target stock, acceptable impact of the fishery on the ecosystem, effectiveness of the fisher management system (including all relevant biological, technological, economic, social, environmental, and commercial aspects), and compliance with relevant local and national local laws and standards and international understandings and agreements.

Mass transit

Movement of large groups of persons in a single vehicle, such as a bus or train car.

Material safety data sheets (MSDS)

Contain product information on chemicals, chemical compounds, and chemical mixtures. MSDSs can also include instructions for the safe handling, storage, and disposal of products.

Mechanical ventilation

Ventilation provided by machine-powered equipment, such as motor-driven fans and blowers, but not by devices such as wind-driven turbine ventilators and mechanically operated windows.

Methylmercury

Any of various toxic compounds of mercury containing the complex CH_3Hg -; it often occurs in pollutants and bioaccumulates in living organisms, especially in higher levels of a food chain.

Microclimate factor (k_{mc})

A coefficient used in calculating the landscape coefficient; it adjusts the Evapotranspiration Rate to reflect the climate of the immediate area.

Microirrigation

Involves irrigation systems with small sprinklers and microjets or drippers designed to apply small volumes of water. The sprinklers and microjets are installed within a few centimeters of the ground; drippers are laid on or below grade.

Minimum efficiency reporting value (MERV)

A filter rating established by the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE 52.2–1999, Method of Testing General Ventilation Air Cleaning Devices for Removal Efficiency by Particle Size). The MERV efficiency categories range from 1 (very low efficiency) to 16 (very high).

Mixed-mode ventilation

A combination of natural ventilation and mechanical ventilation, which allows the building to be ventilated mechanically or naturally or, at times, both mechanically and naturally simultaneously.

Native vegetation and adapted vegetation

Plants indigenous to a locality (native) or plants that are adapted to the local climate and are not considered invasive species or noxious weeds (adapted); they require limited irrigation following planting, do not require active maintenance such as mowing, and provide habitat value.

Natural areas

Native or adapted vegetation or other ecologically appropriate features.

Natural ventilation

Ventilation provided by thermal, wind, or diffusion effects through doors, windows, or other intentional openings in the building.

Negative-pressure smoking rooms

Rooms with mechanical airflow devices (such as exhaust fans) to lower air pressure below that of surrounding areas. The negative pressure causes air to flow from surrounding areas into the space to provide ventilation.

Net present value

The total discounted value of all cash inflows and outflows from a project or investment.

Nonpotable water

Water that does not meet EPA's drinking water standards, and therefore, is not suitable for human consumption.

Nonoccupied spaces

Rooms used by maintenance personnel and not open to occupants. Examples include janitorial closets, cleaning supply storage, and equipment rooms.

Nonregularly occupied spaces

Corridors, hallways, lobbies, break rooms, copy rooms, office supply closets, kitchens, restrooms, and stairwells.

Off-site salvaged materials

Materials recovered from an off-site source and reused.

On-demand heaters

Heaters that heat water only when it is needed and then apply only the amount of heating required to satisfy the user's immediate needs.

Ongoing commissioning

A continuous process that methodically identifies and corrects system problems to maintain optimal building performance; the process includes regular measurement and comparative analysis of building energy data over time.

Ongoing consumables

Goods with a low cost per unit and are regularly used and replaced in the course of business. Examples include paper, toner cartridges, binders, batteries, and desk accessories.

On-site salvaged materials

Materials recovered from and reused at the same building site.

Open-grid pavement

For LEED purposes, pavement that is less than 50% impervious and contains vegetation in the open cells. Open-grid pavement consists of a thin, open-graded asphalt mix layered over the top of a coarse stone aggregate; water passes through the asphalt surface and is stored in the aggregate, from which it slowly percolates into the soil.

Outdoor air

The ambient air that enters a building either through a ventilation system (with intentional openings) for natural ventilation or by infiltration. (ASJRAE 62.1 – 2004)

Owner

A person directly employed by the organization holding title to the project building and recognized by law as having rights, responsibilities, and ultimate control over the project building.

Parking footprint

The area of the site that is occupied by the parking structure.

Partially shielded

An exterior light fixture that is shielded so that the lower edge of the shield is at or below the centerline of the lamp to minimize light emitted above the horizontal plane.

Perviousness

The percentage of area covered by a paving system that is open and allows moisture to soak into the earth below the paving system.

Photovoltaic or solar energy

Electricity from photovoltaic cells that convert the energy in sunlight into electricity.

Picogram

One trillionth of a gram.

Picograms per lumen-hour

A measure of the amount of mercury in a lamp per unit of light delivered over its useful life.

Plumbing fixtures and fittings

Receptacles, devices, or appliances that are either permanently or temporarily connected to the building's water distribution system and receive liquid or liquid-borne wastes and discharge wastewater, liquid-borne waste materials, or sewage either directly or indirectly to the drainage system of the premises. This includes water closets, urinals, lavatories, sinks, showers, and drinking fountains.

Pollutants

Emissions of carbon dioxide (CO₂), sulfur dioxide (SO₂), nitrogen oxides (NO_x), mercury (Hg), small particulates (PM_{2.5}), and large particulates (PM₁₀).

Postconsumer content

The percentage of material in a product that is recycled from consumer waste.

Postconsumer fiber

Paper, paperboard, and fibrous wastes that are collected from municipal solid waste streams.

Post-consumer material

Recycled from consumer waste.

Potable water

Water suitable for drinking that meets or exceeds EPA drinking water standards; it is supplied from wells or municipal water systems.

PPM

Stands for parts per million

Pre-consumer content

Formerly known as *post-industrial content*, is the percentage of material in a product that is recycled from manufacturing waste. Examples include planer shavings, plytrim, sawdust, chips, bagasse, sunflower seed hulls, walnut shells, culls, trimmed materials, print overruns, overissue publications, and obsolete inventories. Excluded are materials such as rework, regrind, or scrap generated in a process and capable of being reclaimed within the same process that generated it (ISO 14021).

Preferred parking

Parking available to particular users, includes designated spaces close to the building, designated covered spaces, discounted parking passes, and guaranteed passes in a lottery system.

Preventive maintenance

Routinely scheduled equipment inspection, cleaning, and repair conducted to detect and prevent equipment failure and keep materials and systems in working order.

Private or private use

Applies to plumbing fixtures in residences and apartments, private bathrooms in hotels and hospitals, and restrooms in commercial establishments; these fixtures are intended for the use of

a family or an individual.

Process water

Water used for industrial processes and building systems, such as cooling towers, boilers, and chillers.

Project Building

The real property, including an occupied and operational building(s) and the associated grounds that is registered for and actively pursuing LEED certification.

Property Manager

A person directly employed by the organization who oversees operations, maintenance, and upkeep of the project building on behalf of the owner or serves as the primary liaison between the owner and project building tenants.

Protected Harvest certification

Certification standards that reflect the unique growing requirements and environmental considerations of each crop and bioregion. Each crop- and region-specific standard is divided into the following three parts: production, toxicity, and chain-of-custody.

Public or public use

Applies to plumbing fixtures in all buildings or structures that are not defined as private or private use. If the classification for public or private use is unclear, project teams shall default to public-use flow rates.

Rainforest Alliance certification

A certification that is awarded to farms that protect wildlife by planting trees, control erosion, limit agrochemicals, protect native vegetation, hire local workers, and pay fair wages

Rapidly renewable materials

Agricultural products, both fiber and animal, that take 10 years or less to grow or raise and can be harvested in an ongoing and sustainable fashion.

Recirculated air

Air removed from a space and reused as supply air, delivered by mechanical or natural ventilation.

Reclaimed water

Wastewater that has been treated and purified for reuse.

Recommissioning

Applies to buildings that were previously commissioned as part of new construction or retrocommissioning. Recommissioning involves periodic conducting of the original commissioning tests from the commissioning or retrocommissioning process to ensure that the original results are maintained over time.

Recovered fiber

Includes both postconsumer fiber and waste fiber from the manufacturing process.

Recycling

The collection, reprocessing, marketing, and use of materials that were diverted or recovered from the solid waste stream.

Refrigerants

The working fluids of refrigeration cycles that absorb heat from a reservoir at low temperatures

and reject heat at higher temperatures

Regionally harvested (or extracted) and processed materials

Materials that come from within a 500-mile radius of the project site.

Regular building occupant

A worker who either has a permanent office or workstation in the project building or typically spends 10 hours per week or more in the project building. For a residential building, this includes all persons who live in the building.

Regularly occupied spaces

In commercial buildings, these are areas where people sit or stand as they work; in residential applications these spaces are living and family rooms.

Relative humidity

The ratio of partial density of water vapor in the air to the saturation density of water vapor at the same temperature and the same total pressure.

Renewable energy

Energy from sources that are not depleted when used. This includes energy from the sun, wind, and small hydropower. Ways to capture energy from the sun include photovoltaic, thermal solar energy systems, and bioenergy. One issue with bioenergy is the amount of fossil fuel energy used to produce it.

Renewable energy certificates (RECs)

Tradable environmental commodities representing proof that a unit of electricity was generated from a renewable energy resource; RECs are sold separately from the electricity itself and thus allow the purchase of green power by a user of conventionally generated electricity.

Replacement value

The cost of an item purchased from a retail vendor, reflecting its age and condition.

Retrofit

Any change to an existing facility, such as the addition or removal of equipment or a required adjustment, connection, or disconnection of equipment.

Return air

Air removed from conditioned spaces and either recirculated in the building or exhausted to outside.

Reuse

Method of returning materials to active use in the same or a related capacity and thus extends the lifetime of materials that would otherwise be disposed. Examples of ongoing consumables that can be reused include binders, staplers, and other desk accessories, whether they are reused on-site or donated to other facilities.

Sedimentation

The addition of soil particles to waterbodies by natural and human-related activities. Sedimentation often decreases water quality and can accelerate the aging process of lakes, rivers and streams.

Sequence of operations

A detailed system-level documentation for each base building system that defines which operational states are desired under which conditions: running vs. idle systems; full-load or part-load operation; staging or cycling of compressors, fans, or pumps; proper valve positions; desired

system water temperatures; target duct static air pressures depending on other variables (e.g., outside air temperatures, room air temperatures, and/or relative humidity); and any reset schedules or occupancy schedules.

Setpoints

Normal ranges for building systems and indoor environmental quality, outside which action is taken.

Simple payback

The amount of time it will take to recover the initial investment through savings. The simple payback (in years) can be calculated by dividing first cost by annual savings.

Site area

The total area within the project boundary of the applicant building, and includes all areas of the property, both constructed areas and nonconstructed areas. The open space of the site area is the portion not covered by the building footprint.

Site energy

The amount of heat and electricity consumed by a building, as reflected in utility bills.ⁱ

Solar reflectance

The ratio of the reflected solar energy to the incoming solar energy over wavelengths of approximately 0.3 to 2.5 micrometers. A reflectance of 100% means that all of the energy striking a reflecting surface is reflected back into the atmosphere; none of the energy is absorbed by the surface. The best standard technique for its determination uses spectro-photometric measurements with an integrating sphere to determine the reflectance at each different wavelength. An averaging process using a standard solar spectrum then determines the average reflectance (see ASTM Standard E903).

Solar reflectance

A measure of the ability of a surface material to reflect sunlight—visible, infrared, and ultraviolet wavelengths—on a scale of 0 to 1. Solar reflectance is also called albedo. Black paint has a solar reflectance of 0; white paint (titanium dioxide) has a solar reflectance of 1.

Solar reflectance index (SRI)

A measure of a material's ability to reject solar heat, as shown by a small temperature rise. Standard black (reflectance 0.05, emittance 0.90) is 0 and a standard white (reflectance 0.80, emittance 0.90) is 100. For example, a standard black surface has a temperature rise of 90°F (50°C) in full sun, and a standard white surface has a temperature rise of 14.6°F (8.1°C). Once the maximum temperature rise of a given material has been computed, the SRI can be computed by interpolating between the values for white and black.

Solar thermal systems

Systems that collect or absorb sunlight via solar collectors to heat water that is then circulated to the building's hot water tank. The hot water can be used to warm swimming pools or provide domestic hot water for residential and commercial use.

Source energy

The total amount of raw fuel that is required to operate a building. It incorporates all transmission, delivery, and production losses, thereby enabling a complete assessment of energy efficiency in a building.ⁱⁱ

Source reduction

Method of reducing the amount of unnecessary material brought into a building. Examples include purchasing products with less packaging and sustainable design.

Species factor (k_s)

A coefficient used to adjust the Evapotranspiration Rate to reflect the biological features of a specific plant species.

Standard operating procedures (SOPs)

Detailed, written instructions documenting a method to achieve uniformity of performance.

Stormwater runoff

Water from precipitation that flows over surfaces into sewer systems or waterbodies. All precipitation that leaves project site boundaries on the surface is considered stormwater runoff.

Stratified random sampling

A method that groups members of a population into discrete subgroups, based on characteristics that may affect their responses to the survey. For example, a survey of building occupants' commuting behavior might separate people by income level and commuting distance. To yield representative results, the survey should sample the subgroups according to their proportions in the total population.

Submetering

A method of determining the proportion of energy use within a building attributable to specific mechanical end uses or subsystems (i.e., the heating subsystem of an HVAC system).

Substantial completion

Substantial completion of the building's indoor plumbing system is defined as either initial building construction or the last plumbing renovation of all or part of the building that included a 100% retrofit of all plumbing fixtures and fittings as part of the renovation.

Sustainable purchasing policy

A policy that gives preference to products that have little to no negative impacts on the environment and society throughout its life cycle, and also gives preference to those products that are supplied by companies whom also have little to no negative environmental and social impacts. The sustainable purchasing policy commits the organization to an overarching course of action, which empowers staff working at the operations level.

Sustainable purchasing program

The development, adoption, and implementation of a procurement strategy, which culminates in the purchase of products that have little to no negative impacts on the environment and society through its life cycle or that are supplied by companies whom also have little to no negative environmental and social impacts. The program is an operational working strategy aligned and in support of an organization's sustainable purchasing policy.

Systems Narrative Intro

A general description of each of the following types of base building systems installed in the project building: space heating, space cooling, ventilation, domestic water heating, humidification and/or dehumidification, and lighting. The narrative includes summaries of the central plant, distribution, and terminal units, as applicable. It also includes all the controls associated with these systems—central automatic, local automatic, or occupant control. It accounts for any differences in system types for different portions of the project building—for different floors, for interior vs. perimeter zones, etc. The systems narrative does not need to list each base building system individually (i.e., not each and every chiller) but does describe the distinct types of systems as listed above (i.e., all chillers having the same basic design and specifications). Other types of systems than those listed above—process equipment, office equipment, plumbing systems, fire protection systems—may be included in the narrative if desired but are not required.

Systematic sampling

A method of surveying every xth person in the population, using a constant skip interval. It relies on random sampling order or an order with no direct relationship to the variable under analysis (alphabetical order when sampling for commute behavior).

Telecommuting

Working by using telecommunications and computer technology from a location other than the usual or traditional place of business—for example, from home, a satellite office, or a telework center.

Thermal comfort

A condition experienced by building occupants expressing satisfaction with the thermal environment.

Two-year, 24-hour design storm

The basis of planning stormwater management facilities that can accommodate the largest amount of rainfall expected over a 24-hour period during a two-year interval.

Undercover parking

Parking that is located underground, under a deck, under a roof, or under a building; its hardscape surfaces are shaded.

Underground parking

A parking facility that is a “tuck-under” or stacked structure that reduces the exposed parking surface area.

Universal notification

Notifying building occupants not less than 72 hours before a pesticide is applied in a building or on surrounding grounds under normal conditions, and within 24 hours after application of a pesticide in emergency conditions. Use of a least toxic pesticide or self-contained nonrodent bait does not require universal notification; all other pesticides applications do.

USDA Organic

A certification for products that contain at least 95% organically produced ingredients (excluding water and salt). Any remaining product ingredients must consist of approved non-agricultural substances (as listed by USDA) or non-organically produced agricultural products that are not commercially available in organic form.

Vegetation-containing artifices

Planters, gardens or other constructs intended to host flora.

Ventilation

The provision and removal of air to control air contaminant levels, humidity, or temperature within an indoor space. Ventilation is measured in air changes per hour—the quantity of infiltration air in cubic feet per minute (cfm) divided by the volume of the room.

Visible light transmittance (T_{vis})

The ratio of total transmitted light to total incident light (i.e., the amount of visible spectrum, 380–780 nanometer light passing through a glazing surface divided by the amount of light striking the glazing surface). The higher the T_{vis} value, the more incident light is passing through the glazing.

Vision glazing

Provides views of the outdoors to building occupants through vertical windows between 2'6" and 7'6" above the floor. Windows below 2'6" and windows above 7'6" (including daylight glazing, skylights, and roof monitors) do not count as vision glazing for this credit.

Volatile organic compounds (VOCs)

Compounds that are volatile at typical room temperatures. The specific organic compounds addressed by the referenced Green Seal Standard (GS-11) are identified in EPA Reference Test Method 24 (Determination of Volatile Matter Content, Water Content, Density Volume Solids, and Weight Solids of Surface Coatings), Code of Federal Regulations Title 40, Part 60, Appendix A.

Walk-off mats

Mats placed inside building entrances to capture dirt, water, and other materials tracked inside by people and equipment.

Waste

All materials that flow from the building to final disposal. Examples include paper, grass trimmings, food scraps, and plastics. For this credit, waste refers to all materials that are capable of being diverted from the building's waste stream of the building through waste reduction, including source reduction, recycling, and composting.

Waste disposal

Elimination of waste by means of burial in a landfill, combustion in an incinerator, dumping at sea, or any other way that is not recycling or reuse.

Waste diversion

A management activity that disposes of waste other than through incineration or landfilling. Examples are reuse and recycling.

Waste reduction

Includes source reduction and waste diversion through reuse or recycling.

Waste reduction program

(1) describes the organization's commitment to minimizing waste disposal by using source reduction, reuse, and recycling, (2) assigns responsibility within the organization for implementation of the program, (3) lists the general actions that will be implemented to reduce waste, and (4) describes tracking and review procedures to monitor waste reduction and improve waste reduction performance.

Waste stream

The overall flow of wastes from the building to the landfill, incinerator, recycling facility, or other disposal site.

Water meter

A device used to measure the volume of water usage. Most commercial building water meters are designed to measure cold potable water.

Wave and tidal power systems

System that captures energy from waves and the diurnal flux of tidal power, respectively. The captured energy is commonly used for desalination, water pumping and electricity generation.

Wind energy

Electricity generated by wind turbines.

Xeriscaping

A landscaping method designed for water conservation so that routine irrigation is not necessary. It includes using drought-adaptable and low-water plants, soil amendments such as compost to conserve moisture, and mulches to reduce evaporation.

ⁱ U.S. Environmental Protection Agency. Energy Star Program. Understanding Source and Site

Energy. Retrieved July 2008.

www.energystar.gov/index.cfm?c=evaluate_performance.bus_benchmark_comm_bldgs.

ii Ibid.