

GREEN CLEANING POLICY

EB- O&M	
Prerequisite	IEQ Prerequisite 3
Points	Required

Intent

To reduce the exposure of building occupants and maintenance personnel to potentially hazardous chemical, biological and particulate contaminants, which adversely affect air quality, human health, building finishes, building systems and the environment.

Requirements

Have in place a green cleaning policy for the building and site addressing the following green cleaning credits and other requirements:

- Purchase sustainable cleaning and hard floor and carpet care products meeting the sustainability criteria outlined in IEQ Credit 3.3: Green Cleaning—Purchase of Sustainable Cleaning Products and Materials.
- Purchase cleaning equipment meeting the sustainability criteria outlined in IEQ Credit 3.4: Green Cleaning—Sustainable Cleaning Equipment.
- Establish standard operating procedures addressing how an effective cleaning and hard floor and carpet maintenance system will be consistently utilized, managed and audited. Specifically address cleaning to protect vulnerable building occupants.
- Develop strategies for promoting and improving hand hygiene, including both hand washing and the use of alcohol-based waterless hand sanitizers.
- Develop guidelines addressing the safe handling and storage of cleaning chemicals used in the building, including a plan for managing hazardous spills or mishandling incidents.
- Develop requirements for staffing and training of maintenance personnel appropriate to the needs of the building. Specifically address the training of maintenance personnel in the hazards of use, disposal and recycling of cleaning chemicals, dispensing equipment and packaging.
- Provide for collecting occupant feedback and continuous improvement to evaluate new technologies, procedures and processes.

This policy must adhere to the LEED 2009 for Existing Buildings: Operations & Maintenance policy model (see Introduction). At a minimum, the policy must cover the green cleaning procedures and materials that are within the building and site management's control.

Ventilation is the process of supplying air to or removing air from a space for the purpose of controlling air contaminant levels, humidity, or temperature within the space. (ASHRAE 62.1-2007).

1. Benefits and Issues to Consider

Environmental Issues

The commercial cleaning industry in the United States annually uses 8 billion pounds of chemicals.¹⁷ Many cleaning products contain harmful chemicals that have a negative effect on full-time building occupants and maintenance staff. Exposure to such chemicals, either through inhalation or skin absorption, can increase adverse health risks such as reproductive problems and eye, skin, and respiratory irritation.¹⁸ If not disposed of properly, cleaning products can also have negative environmental impacts, including air and water pollution, bioaccumulation of toxic substances in plants and animals, endocrine disruption in wildlife, and ozone depletion.¹⁹ Used correctly, green cleaning products can help to reduce many of these health and environmental hazards.

Economic Issues

Implementing a green cleaning policy can be cost neutral compared with a traditional cleaning program because of the increased availability of green products, competition among product manufacturers, and advancements in product performance. Additionally, properly utilizing cleaning solution concentrates can decrease the annual purchasing and waste disposal costs associated with cleaning chemicals. However, in buildings where the current cleaning program is inadequate, any necessary increase in cleaning frequency and product usage may result in additional maintenance costs.

The use of green cleaning systems can help avoid work injuries and lawsuits resulting from exposure to hazardous cleaning chemicals. Additionally, using green cleaning and maintenance practices that emit fewer harmful compounds can improve a building's overall indoor air quality as well as occupants' well-being and productivity.

2. Related Credits

Instituting a comprehensive green cleaning policy should also influence the procedures and protocols in place for chemical purchasing and use, chemical dilution methods, carpet and floor maintenance, and staff education. The following credits are related to this prerequisite:

- IEQ Credit 3.1: Green Cleaning—High-Performance Cleaning Program
- IEQ Credit 3.2: Green Cleaning—Custodial Effectiveness Assessment
- IEQ Credit 3.3: Green Cleaning—Sustainable Cleaning Products and Materials
- IEQ Credit 3.4: Green Cleaning—Sustainable Cleaning Equipment

Building cleanliness will assist in any existing pest management strategies in place and decrease the potential for pests to survive and populate the project building. Thus, this prerequisite is related to the following credits:

- SS Credit 3: Integrated Pest Management, Erosion Control and Landscape Management Plan
- IEQ Credit 3.6: Green Cleaning—Indoor Integrated Pest Management

3. Summary of Referenced Standards

There are no referenced standards for this credit.

4. Implementation

The purpose of this prerequisite is to ensure that every LEED for Existing Buildings: Operations & Maintenance Certified building sets goals for green cleaning and maintenance and is actively working to achieve them. Facility managers must establish goals to meet the requirements for purchasing green cleaning products, procuring maintenance equipment, instituting standard

operating procedures for floor maintenance, outlining strategies for hygienic hand washing, handling and storing cleaning chemicals, training staff, and assessing the successes and limitations of a high-performance cleaning program.

Setting targets for the green cleaning policy will help facility managers achieve a hygienic and safe indoor environment. In developing the green cleaning policy, facility managers must first determine the green cleaning policy's overall goals as they relate to their project, areas and substrates to be maintained, and facility usage patterns. Cleaning product and service suppliers can help develop recommendations and specifications for cleaning products and methods. (Refer to the related credits for recommended performance metrics and criteria relating to cleaning chemicals, products, equipment, procedures, and protocols.) The green cleaning policy should also inform requests for proposals used to identify and contract with outside service and/or product providers.

The green cleaning policy must include green cleaning materials that are within the building and site management's control. Although no minimum level of performance is required, the policy should be adhered to once it has been established, and performance should be demonstrated in its related credits.

Policy Components

The green cleaning policy must include the following sustainability criteria:

- The purchase of sustainable cleaning products for hard floors and carpets that meet the sustainability criteria outlined in IEQ Credit 3.3: Green Cleaning—Purchase of Sustainable Cleaning Products and Materials.
- The purchase of cleaning equipment that meets the sustainability criteria outlined in IEQ Credit 3.4: Green Cleaning—Sustainable Cleaning Equipment.
- Standard operating procedures that address how an effective cleaning, hard floor maintenance, and carpet maintenance system will be consistently implemented, managed, and audited. The procedures should reflect core principles of green cleaning, including minimal to no use of potentially harmful and irritating chemicals; removal or elimination of dirt, dust, and other contaminants (as contrasted with dusting and similar traditional approaches to contaminants); protection and preservation of surfaces during cleaning (particularly hard floors and carpets); and proactive strategies to reduce contaminant infiltration at the source (e.g., walk-off mats). They should identify likely occupants who are disproportionately affected by cleaning practices and propose methods to minimize impacts on those groups. These methods may include adjustments to cleaning procedures, frequencies, timing, product choices, or similar adaptations.
- Strategies for promoting hand hygiene. Potential strategies include educating staff about the importance of hand hygiene and providing waterless hand sanitizers. Consider the use of hand soaps that do not contain antimicrobial agents (other than as a preservative), except where required by health codes and other regulations.
- Handling and storage of cleaning chemicals. Cleaning chemicals must be handled and stored in a manner that limits opportunities for accidental spills, leaks, and other mishaps. Carefully consider safe methods of storage (e.g., placing heavy containers at accessible heights, separating any volatile chemicals) and handling (e.g., identifying chemicals that require use of gloves, establishing handling protocols that minimize the likelihood of spills). The custodial lead should ensure that the cleaning staff is educated on procedures to minimize exposures and impacts when managing spills and similar incidents.
- Training of maintenance staff. Maintenance staff are responsible for the effective implementation of all green cleaning procedures on a daily basis. Ensuring that staff are

fully informed and educated on products, equipment, and procedures (as well as the goals and priorities driving those product and equipment choices and procedures) is critical to the success of a green cleaning program. The training program should take care to help staff understand the environmental and health issues associated with the products and equipment they are using, and their specific responsibilities and expectations as to application and disposal (both of the product and any associated packaging).

- Provisions for collecting occupants' feedback on green cleaning procedures and associated results. Occupants' satisfaction with custodial services is an important part of successful property management, and green cleaning procedures may represent a departure from current practices. Feedback about building cleanliness can be solicited on a regular basis via surveys or a complaint system.

5. Timeline and Team

The green cleaning policy should be drafted and signed by the facility manager and/or owner. The policy should be in place over the entire performance period and thereafter. Facility managers must first assess the state of the facility's current cleaning procedures and determine overall goals of the cleaning policy. Cleaning and maintenance staff can then be engaged to help in this effort and also to determine what specific training needs will be necessary to implement the policy. If cleaning procedures are performed by contracted staff, inform these vendors of the policy. It may be necessary to renegotiate existing contracts.

6. Calculations

There are no calculations associated with this credit.

7. Documentation Guidance

As a first step in preparing to complete the LEED-Online documentation requirements, work through the following measures. Refer to LEED-Online for the complete descriptions of all required documentation.

- The building's green cleaning policy should detail the use of cleaning products and practices.
- Update any relevant contracts that would be affected by the green cleaning policy.

8. Examples

IEQ

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Prerequisite 3

Green Cleaning Policy

- 1.0 To reduce the exposure of building occupants and maintenance personnel to potentially hazardous chemical, biological, and particulate contaminants, which adversely affect air quality, human health, building finishes and systems, and the environment, (Building) has developed this Green Cleaning policy.
- 2.0 Scope
 - 2.1. (Building) will encourage the purchasing of the following green cleaning equipment. Purchasing activity for the entire building and associated ground must be included and documented.
 - 2.1.1. Cleaning, hard floor, and carpet care products meeting the sustainability criteria outlined in IEQ Credit 3.3.
 - 2.1.2. Cleaning equipment meeting the sustainability criteria outlined in IEQ Credit 3.4.
 - 2.2. (Building) will establish standard operating procedures to address how an effective cleaning, hard floor, and carpet maintenance system will be consistently utilized, managed, and audited. This will specifically address cleaning to protect vulnerable building occupants, such as occupants with asthma, other respiratory conditions, or sensitive or damaged skin.
 - 2.2.1. A written floor maintenance plan and log should be kept that details the number of coats of floor finish applied, including base and top coats, along with relevant maintenance and restoration practices and the dates of these activities.
 - 2.2.2. The duration between stripping and refinishing cycles should be documented.
 - 2.3. (Building) will develop strategies for promoting and improving hand hygiene, including the following:
 - 2.3.1. Hand washing (Suggested Strategies)
 - 2.3.1.1. Educational program must be offered.
 - 2.3.1.2. Posters must be provided in lavatories.
 - 2.3.2. Use of alcohol-based waterless hand sanitizers (Suggested Strategies)
 - 2.3.2.1. Alcohol-based hand sanitizers must be provided for each (classroom, lavatory, teachers lounge, other).
 - 2.3.3. Hand soaps must not contain antimicrobial agents (other than as a preservative system), except where required by health codes and other regulations.
 - 2.3.4. Hands-free dispensers must be used for janitorial paper products to eliminate levers and cranks that users share.
 - 2.4. (Building) has developed guidelines addressing the safe handling and storage of cleaning chemicals used in the building, including a plan for handling hazardous spills or mishandling incidents.
 - 2.4.1. (List guidelines) (Suggested Strategies)
 - 2.4.2. A log should be kept that details all housekeeping chemicals used or stored on the premises.
 - 2.4.3. Cleaning products procured for use in the building should meet the requirements in EQ Credit 3.3.
 - 2.4.4. Proper containment, storage and dispensing techniques should be implemented.
 - 2.4.5. Proper hot and cold water supplies and drain systems in janitor closets for the use of chemical dispensing and dilution should be installed.
 - 2.4.6. Portion controlled dilution equipment or pre-measured pouches of chemical concentrates should be used.
 - 2.5. (Building) will develop requirements for staffing and training maintenance personnel appropriate to the needs of the building. These requirements will specifically address the training of maintenance personnel in the hazards of use, disposal, and recycling of cleaning chemicals, dispensing equipment, and packaging.
 - 2.5.1. Training records certifying each person's specific training dates should be documented.
 - 2.6. (Building) will develop provisions for collecting occupant feedback and continuous improvement to evaluate new technologies, procedures, and processes:
 - 2.6.1. Implement an occupant survey and complaint response system.
 - 2.6.2. Document survey results and remedial actions taken.
- 3.0 Performance Metric
 - 3.1. Green cleaning equipment purchases should meet the guidelines in IEQ Credit 3.4. Standards include Green Seal GS-37, 9, 1, and 41, Environmental Choice CCD-110, 146, 148, 112, 113, 115, 147, 82, 86, and 104, California Code of Regulations maximum allowable VOC levels, and the U.S. EPA Comprehensive Procurement Guidelines. Documentation of all purchases related to the applicable categories must be maintained on an annual basis.
 - 3.2. Documentation of the type of chemical, volume, and concentration used in all cleaning processes must be maintained.
 - 3.3. Documentation of the frequency of each cleaning process must be maintained.
 - 3.4. Records and documentation for all guidelines, training, occupant feedback, and other strategies must be maintained.
- 4.0 Performance goals
(Building) will strive to identify and use low-environmental-impact chemicals in its cleaning policies while reducing exposure of occupants to chemical hazards. (Building) will also dispose of and/or recycle cleaning materials and chemicals in a sustainable manner.
- 5.0 Procedures and Strategies
 - 5.1. The (Responsible Party/Title) must be responsible for:
 - 5.1.1. Adopting purchasing policy for sustainable cleaning products and equipment.
 - 5.1.2. Establishing and enforcing standard operating procedures for consistent use of floor cleaning system.
 - 5.1.2.1. Providing ongoing documentation of enforcement.
 - 5.1.3. Implementing strategies to improve hand hygiene.
 - 5.1.4. Developing and enforcing guidelines for handling safe storage and cleaning chemicals.
 - 5.1.4.1. This must include plan for managing hazardous spills.
 - 5.1.5. Implementing training for staff and maintenance personnel.
 - 5.1.6. The collection of occupant feedback.
- 6.0 Responsible Parties
 - 6.1. Facility Manager _____
 - 6.2. Purchasing Manager _____
 - 6.3. Maintenance Manager _____
 - 6.4. Staff Manager _____
- 7.0 Time Period. This policy will remain in effect going forward from its inception date, (start date).
- 8.0 Definitions
 - 8.1. Green cleaning is the use of cleaning products and practices that have reduced environmental impacts in comparison with conventional products and practices.
 - 8.2. Recycling is the collection, reprocessing, marketing, and use of materials that were diverted or recovered from the solid waste stream.
 - 8.3. Sustainable purchasing policy is the preferential purchasing of products that meet sustainability standards.
- 9.0 Resources