

## **Guidelines and Best Practices - Green Cleaning Colorado State University**

### **1. Goals**

Colorado State University is committed to providing clean and safe environments for all students and employees. This policy is intended to communicate the university's dedication to this commitment across all university campuses and interior spaces with the use of sustainable and environmentally preferred cleaning products and methods. This policy supports sustainability initiatives across the university by helping conserve resources while safeguarding the environment and wellbeing of our students and employees in the places we learn, research, work, and live.

Guidelines and Best Practices for Green Cleaning may be evaluated by:

<b><u>Category</u></b>	<b><u>Goal</u></b>	<b><u>Performance measurement unit</u></b>
Cleaning products and materials purchases	90% meet sustainability criteria	'Green' purchases as a % of total spend
Cleaning equipment	100% of new purchases meet sustainability criteria. 40% of existing equipment will meet applicable sustainability criteria.	Number of Items / 'Green' purchases as a % of total spend
Toxic chemical usage (applies to all cleaning chemicals, including those not addressed by LEED v4.1 EQ credit Green Cleaning – Option 4. Cleaning Products and Materials)	Chemicals which do not meet the sustainable criteria will only be used in situations where: a viable alternative is not available, unable to sufficiently clean the area, the area cannot be replaced (such as floor tile) and area or situation represents a hazard to human health.	Number of uses / 'Non-green' purchases as a % of total spend
Disposable Housekeeping Products (paper products such as hand towels, toilet tissue, tissue paper, etc., and trash bags)	100% of janitorial paper purchases meet one or more of the sustainability criteria, exclusively certified green products (such as ECOLOGO, FSC Certified, Green Seal Certified, 100% recycled content)	'Green' purchases as a % of total spend

### **2. Procedures and strategies for implementation**

#### **a. Hard floor and carpet cleaning and maintenance**

- Hard floors, including tile, concrete, and wood surfaces, will be cleaned once a week or more frequently (as needed) with only sustainable cleaning products. No stripping or coatings will be applied to hard floor surfaces. With the exception that wood flooring will need to have seal & finish to protect the wood. Concrete floors need to be sealed if they are porous.
- For those floor surfaces that need to have a finish to protect them, use the most eco-friendly finish available.
- Carpets will be vacuumed daily in high traffic areas, other areas as needed with vacuum cleaners that meet the sustainability criteria listed later in this document.
- The carpets will be inspected for stains and other damage during periodic vacuuming. If feasible, the necessary areas will be spot cleaned with sustainable carpet cleaning materials. If damaged, the carpet tiles will be replaced.
- When carpet extraction equipment must be used, methods to reduce chemical usage will be implemented.

**b. Protection of all occupants and staff during and following cleaning**

- Minimize exposure of potentially hazardous chemical, biological and particle contaminants which may adversely impact indoor air quality, health, building finishes and systems, and to equally minimize the impact of the facility cleaning on the environment.
- Especially note, vulnerable occupants include women who are pregnant, children, elderly occupants, and individuals with asthma, allergies, or other sensitivities.
- As much as possible, only sustainable cleaning products will be used. Please refer to the goals and tracking sections of this document for additional information.
- Any cleaning that involves the use of carpet cleaners, or if at any point the use of a non-sustainable cleaning product is required, this cleaning will be performed after regular business hours.
- We recognize that using sustainable cleaning products also protects the health of all our building occupants, including our janitorial employees.

**c. Disinfectant and sanitizer selection and use**

- Only hand soaps and hand sanitizers that meet at least one of the sustainability criteria listed under the procurement guidelines (listed below) will be considered to meet the recommendations of this document.
- Hand sanitizers will be placed throughout the building for the use of occupants
- Only disinfectants meeting the procurement sustainability criteria listed below will be considered to meet the requirements of this document. Disinfectants will be kept locked in the janitorial closets and may only be used by the cleaning staff.
- Janitorial staff will be required to use metering systems in janitorial closets for disinfectants to ensure proper dosing.

- d. Safe storage and handling of cleaning chemicals, including spill management**
- Cleaning chemicals will be stored in the janitorial closets to prevent access by other building occupants.
  - Janitorial staff will receive training on the various hazards of different toxic chemicals and how to address spills.
  - Spills will be cleaned and handled according to the manufacturer safety data sheets provided by the manufacturer.
  - All spills will be handled carefully. As soon as a spill of a non-sustainable product occurs, the responsible party must be notified. If the spill occurs in an area to which typical building occupants have access, the area will be roped off and building occupants will be informed to stay clear of the area.
  - Safety data sheets for all of the cleaning chemicals used in the building will be retained and hazard information will be highlighted. This information will be retained and available from janitorial managers. In addition, these sheets will be available electronically.
- e. Strategies for reducing the toxicity of the chemicals used for laundry, ware washing, and other cleaning activities**
- Janitorial staff and building occupants will be supplied with safe cleaning chemicals that meet the sustainability criteria described in the purchasing guidelines listed below.
  - For laundering, ozone laundry systems are preferred because they dramatically reduce energy, water & chemical use. When those systems are not available, traditional laundry systems can be used when laundry soaps meet the sustainability criteria described in the purchasing guidelines listed below.
- f. Strategies for conserving energy, water, and chemicals used for cleaning**
- Cold water will be used, when possible, to reduce energy used to create hot water.
  - The filters in vacuums and other applicable equipment will be changed frequently to enable air flow and reduce the energy consumption and efficacy of the equipment.
  - When cleaning chemicals are necessary, the dilution metering system installed in each janitorial closet will be used to ensure that the proper amount of cleaning chemicals is used.
- g. Strategies for promoting hand hygiene**
- All restrooms will be equipped with soap dispensers, faucets, and towel dispensers. As required and with accessibility considerations, hand dryers and hands-free equipment may be installed.
- h. Staffing, Performance and Training**
- Regular facility audits are recommended to evaluate cleanliness. As a part of the audits, the auditors will interview cleaning staff to ensure that the cleaning and hard floor and carpet maintenance system is being consistently used.

- Audits are recommended at least annually and will be led by the responsible party for this document. The responsible party is responsible for recording the results of the audits in the management records, following up with any cleaning staff to provide additional training and/or guidance and recording these actions.
- All janitorial staff check in each day when they arrive at work. Time tracking software (currently Timeclock Plus) will track staffing levels to ensure adequate personnel are available for cleaning.
- The responsible party will document all training that is provided to the janitorial staff and will ensure that the training plans described above are met.
- When new staff come on board, the responsible party should record the initial training and orientation provided to the staff.

**i. Plan for water, energy, and waste reduction**

- All vacuum filters will be replaced on a regular basis. The responsible party will record maintenance performed on all cleaning equipment, including filter replacement, to ensure that they are regularly replaced to reduce energy usage.
- Where feasible, provide separate containers for collection of compostable materials (bathroom paper towels for instance).

**j. Tracking plan for cleaning product and cleaning equipment purchases**

- All cleaning product and cleaning equipment purchases, made by either the cleaning vendor for use in the building or made by the building management, will be made available upon request for sustainability reporting and to compare against document goals.
- On an annual basis, the responsible party will review all purchases and compare them against the document goals. If the document goals are not being met, the responsible party will take corrective action, typically in the form of providing education to the individuals in charge of procurement on the goals and sustainability criteria outlined in this document.

**k. Staffing and contingency plans**

- A site-specific scope of work or performance outcome describing cleaning service requirements and frequencies will be provided to in-house janitorial staff or outsourced building service contractor.
- The responsible party determines how many people to maintain on the janitorial staff. A staffing plan will be used to determine the workload needed to sufficiently clean the building. The plan is based on budgeting, costing data, building owner requests, and cleaning industry benchmarks.
- A contingency plan will be in place to manage staffing shortages and service interruptions, along with a process to obtain customer feedback when the contingency plan is used.
- Feedback will be collected from building occupants and janitorial staff after contingency plans are implemented via an online survey.
- Occupant and janitorial staff feedback will be considered in the cleaning procedures described in this document. The responsible party will evaluate

whether updates to the staffing plan and contingency plan are necessary based on the feedback.

### **I. Staff training plan**

- All janitorial staff, including backup personnel, are required to receive at least 8 hours of training per year. Training should include the information included in this Best Practices for Green Cleaning at CSU document. The responsible party will record the training attended by each staff member.
- Trainings are held periodically, upon hiring and as needed. Topics cover standard operating procedures for cleaning different surfaces, proper toxic chemical usage and spill management, hazards of toxic chemicals, cleaning to protect vulnerable occupants, cleaning equipment maintenance, and conservation of energy and water usage during cleaning. The responsible party designates staff to coordinate all the trainings.

## **3. Procurement guidelines**

### **a. Sustainability Criteria for Cleaning Products and Materials**

Cleaning products must meet one or more of the following standards:

- Green Seal GS-37, for general-purpose, bathroom, glass and carpet cleaners used for industrial and institutional purposes.
- UL ECOLOGO 2792 for cleaning and degreasing compounds.
- UL ECOLOGO 2759 for hard-surface cleaners.
- UL ECOLOGO 2795 for carpet and upholstery care.
- Green Seal GS-40, for industrial and institutional floor care products.
- UL ECOLOGO 2777, for hard-floor care.
- EPA Safer Choice Standard
- Cradle to Cradle Certified and/or
- Cleaning devices that use only ionized water or electrolyzed water and have third party-verified performance data equivalent to the other standards mentioned above (if the device is marketed for antimicrobial cleaning, performance data must demonstrate antimicrobial performance comparable to EPA Office of Pollution Prevention and Toxics and Design for the Environment requirements, as appropriate for use patterns and marketing claims).

Disinfectants, metal polish, or other products not addressed by the above standards must meet one or more of the following standards:

- UL ECOLOGO 2798 for digestion additives for cleaning and odor control.
- UL ECOLOGO 2791 for drain or grease trap additives.
- UL ECOLOGO 2796 for odor control additives.
- Green Seal GS-52/53, for specialty cleaning products.
- California Code of Regulations maximum allowable VOC levels for the specific product category.

- EPA Safer Choice Standard
- Other multi-criteria sustainability standards and ISO Type 1 ecolabels and/or
- Cleaning devices that use only ionized water or electrolyzed water and have third-party-verified performance data equivalent to the other standards mentioned above (if the device is marketed for antimicrobial cleaning, performance data must demonstrate antimicrobial performance comparable to EPA Office of Pollution Prevention and Toxics and Design for the Environment requirements, as appropriate for use patterns and marketing claims).

Disposable housekeeping paper products and trash bags must meet the minimum requirements of one or more of the following programs:

- All custodial paper products shall be made from 100% post-consumer recycled unbleached paper and meet Green Seal standards. And/or:
  - Cradle to Cradle Certified
  - ECOLOGO certified
  - Forest Stewardship Council (FSC) certified
  - Green Seal certified
  - Other multi-criteria sustainability standards and ISO Type 1 ecolabels
- Trash bags (plastic), should be manufactured using at least 30% recycled content

Hand soaps and hand sanitizers must meet one or more of the following standards:

- no antimicrobial agents (other than as a preservative) except where required by health codes and other regulations (e.g., food service and health care requirements);
- Green Seal GS-41, for industrial and institutional hand cleaners;
- UL ECOLOGO 2784 for hand cleaners and hand soaps;
- UL ECOLOGO 2783 for hand sanitizers;
- EPA Safer Choice Standard

## **b. Sustainability Criteria for Cleaning Equipment**

All powered equipment must have the following features:

- safeguards, such as rollers or rubber bumpers, to avoid damage to building surfaces;
- ergonomic design to minimize vibration, noise, and user fatigue, as reported in the user manual in accordance with ISO 5349-1 for arm vibrations, ISO 2631-1 for vibration to the whole body, and ISO 11201 for sound pressure at the operator's ear;
- as applicable, environmentally preferable batteries (e.g., gel, absorbent glass mat, lithium-ion) except in applications requiring deep discharge and heavy loads where performance or battery life is reduced by the use of sealed batteries.

**Vacuum cleaners** must be certified by the Carpet and Rug Institute Seal of Approval/Green Label Vacuum Program and operate with a maximum sound level of 70 dBA or less in accordance with ISO 11201.

**Carpet extraction equipment**, for restorative deep cleaning, must be certified by the Carpet and Rug Institute's Seal of Approval Deep Cleaning Extractors and Seal of Approval Deep Cleaning Systems program.

**Powered floor maintenance equipment** must have vacuums, guards, or other devices for capturing fine particulates, and must operate with a maximum sound level of 70 dBA, in accordance with ISO 11201.

**Propane-powered floor equipment** must have high-efficiency, low-emissions engines with catalytic converters and mufflers that meet the California Air Resources Board or EPA standards for the specific engine size and operate with a sound level of 90 dBA or less, in accordance with ISO 11201.

**Automated scrubbing machines** must be equipped with variable-speed feed pumps and either (1) on-board chemical metering to optimize the use of cleaning fluids or (2) dilution control systems for chemical refilling. Alternatively, scrubbing machines may use tap water only, with no added cleaning products.

#### **4. Quality Assurance/Quality Control Processes**

The responsible party will evaluate this Best Practices for Green Cleaning document on an annual basis to evaluate progress towards the implementation goals. If any cleaning product or equipment purchases are not being recorded properly, the responsible party will inform the appropriate individuals to ensure that activities are recorded moving forward. The responsible party will evaluate the results of the cleaning audits to determine whether the building is being sufficiently cleaned and whether the standard cleaning procedures are being properly executed. As necessary, the responsible party will revise the Best Practices for Green Cleaning document to include additional cleaning strategies or modify existing cleaning strategies.

In addition, if any implementation goals are not being met, the responsible party will investigate the situation and will work with the individuals purchasing the materials and equipment or using the equipment. The responsible party will evaluate whether updates are necessary to the in order to achieve the implementation goals.

Any revisions that are made to the document will be incorporated into the next training cycle for the janitorial staff.

#### **5. Resources**

- a. [CSU Policy: Environmentally and Socially Responsible Procurement Policy](#)
- b. [CSU Environmental Health and Safety](#)
  - i. [How to find a Safety Data Sheet](#)

- c. [ECOLOGO Certification Program](#)
- d. [EPA Safer Choice Standard](#)
- e. [Green Seal Standards](#)
- f. [Green Seal Information](#)
- g. [LEED – Green Cleaning Policy v4](#)
  - i. [v4.1](#)
- h. [Safety Data Sheet](#)