

<b>SUBJECT:</b> Green Cleaning Policy	<b>Effective Date:</b> 11/7/19	<b>Policy Number:</b> FSP 2017 FO0012	
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	<b>Responsible Authority:</b> Director, Housekeeping and Recycling Services		

**APPLICABILITY/ACCOUNTABILITY:**

This policy applies to the Facilities Operations (FO) Housekeeping & Recycling Services unit (HK&RS) and third-party cleaning contractors hired by FO to perform cleaning services for campus buildings.

**POLICY STATEMENT:**

UCF demonstrates its commitment to environmental stewardship and sustainability by achieving Leadership in Energy and Environmental Design (LEED) certification for all new buildings, and by striving to reach LEED certification for existing Educational & General (E&G) buildings.

Green Cleaning Practices contribute to a building’s level of LEED certification. They reduce the exposure of building occupants and maintenance personnel to potentially hazardous chemicals and biological and particulate contaminants, which adversely affect air quality, human health, building finishes, building systems, and the environment. This policy applies to all cleaning procedures, cleaning material and equipment purchases, and cleaning contractor services that occur inside and on the building site. Specifically, this policy covers the following:

1. The tracking plan for cleaning product and cleaning equipment purchases
2. Hard floor and carpet cleaning and maintenance
3. Protection of vulnerable occupants during cleaning
4. Hand hygiene
5. Safe storage and handling of cleaning chemicals, including spill management
6. Using chemical concentrates
7. Staffing and training plans
8. Provisions for collecting occupant feedback and continuous improvement to evaluate new technologies, procedures, and processes
9. Tracking plan for staffing and overall performance
10. Purchasing guidelines: sustainability criteria for cleaning products and materials
11. Sustainability criteria for cleaning equipment
12. Internal quality assurance and quality control processes

**DEFINITIONS:**

**Green Cleaning.** Cleaning methods and products with environmentally friendly ingredients and procedures, designed to preserve human health and environmental quality. Green cleaning

methods and products avoid the use of products containing toxic chemicals, some of which emit volatile organic compounds that can cause respiratory, dermatological, and other conditions. The manufacturing processes for green cleaning products are environmentally friendly and yield biodegradable products.

**Decibels (dBA):** An expression of the intensity of sounds in the air, as perceived by the human ear

**Green Seal:** An organization that provides science-based environmental certification standards that are credible, transparent, and essential to helping manufacturers, purchasers, and consumers make responsible choices that positively impact business behavior and improve quality of life

**GOALS:**

Category	Goal	Performance measurement unit
Cleaning products and materials purchases	75% meet sustainability criteria	Cost
Cleaning equipment purchases	40% meet sustainability criteria	Percentage of purchased items
Cleaning equipment inventory	40% of equipment in the project inventory will meet the applicable sustainability criteria	Percentage of equipment items
Toxic chemical usage (applies to all cleaning chemicals)	Toxic chemicals will only be used in situations where products meeting the green cleaning requirements are unable to sufficiently clean the area, the area cannot be replaced (such as a floor tile), and represents a hazard to human health	Number of uses

**PROCEDURES:**

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

1. All cleaning products and cleaning equipment purchases, made either by UCF or the cleaning contractor for use in individual buildings, will be recorded.
2. On a quarterly basis, HK&RS will review all purchases against policy guidelines. If the policy guidelines are not being met, HK&RS will take corrective action. The most common corrective actions are to provide sustainability criteria education to the individuals in charge of procurement and to ensure that they understand the policy guidelines.

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

1. Hard floors, including tile, concrete, and wood surfaces, will be cleaned using sustainable cleaning products.
2. Carpets will be vacuumed using vacuum cleaners that meet the sustainability criteria listed under the “Sustainability Criteria for Cleaning Equipment” section of this policy.
3. Once per month, or as needed, the carpets will be inspected for stains and other damages. If feasible, the necessary areas will be spot-cleaned with sustainable carpet cleaning materials.
4. When carpet extraction equipment must be used, methods to reduce chemical usage will be implemented.

### **Protection of vulnerable occupants during cleaning**

1. Vulnerable occupants include pregnant women, children, elderly people, and individuals with asthma, allergies, or other sensitivities.
2. When made aware of vulnerable occupants in a facility or area, only sustainable cleaning products will be used in that area.
3. 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 or during scheduled breaks.

### **Hand hygiene**

1. Only hand soaps and hand sanitizers that meet at least one of the sustainability criteria listed under the purchasing guidelines will be used on campus.
2. Hand sanitizers will be placed in Education & General (E&G) buildings.
3. All restrooms will be equipped with soap and towel dispensers. New or renovated public restrooms will be equipped with hands-free faucets and dryers.

### **Safe storage and handling of cleaning chemicals, including spill management**

1. Cleaning chemicals will be stored in housekeeping closets to prevent unauthorized access.
2. Cleaning staff will receive yearly training on the various hazards of cleaning chemicals and how to address spills.

3. Spills will be cleaned and handled according to the Material Safety Data Sheets (MSDS) for each product.
4. All spills will be handled carefully. Environmental Health & Safety will be notified of any hazardous spills requiring its assistance. If a hazardous spill occurs in an occupied area, the area will be sectioned off and building occupants will be informed to stay clear of the area.
5. MSDS for all cleaning chemicals used by FO will be easily accessible. Information on accessing the SDS database can be found at <http://ehs.ucf.edu/chemsafety/sds.html>.

### **Using chemical concentrates**

1. Concentrated chemicals will be purchased whenever possible.
2. Concentrated chemicals will be diluted using dispensing units, in accordance with the manufacturer's instructions.
3. Concentrated chemicals will clearly be labeled as "concentrates" in the storage area.
4. Cleaning personnel will use the appropriate dilution storage containers.
5. The diluted solution will be mixed in the mop sinks, where any spills will be contained.
6. Housekeeping staff must wear appropriate Personal Protective Equipment (PPE) at all times when diluting concentrates.
7. Containers with diluted solutions must be clearly identified and labeled as containing a diluted solution (as opposed to a concentrated solution).

### **Staffing and training plans**

1. The university uses APPA's Custodial Staffing Guidelines for Educational Facilities to determine the staffing level required to clean each building.
2. In the event of a staffing shortage, FO uses cleaning contractors to provide additional staff.
3. Each HK &RS employee, including cleaning contractors, must complete safety training seminars to meet OSHA standards. Leadership will continually train staff throughout the year on best practices. Staff may also receive training from vendors to improve their skills and knowledge. UCF employee training records are kept in PeopleSoft.

## **Provisions for collecting occupant feedback and continuous improvement to evaluate new technologies, procedures, and processes**

1. During quarterly meetings with building liaisons, the FO director and his or her leadership team members will collect feedback on overall building cleanliness and cleaning procedures effectiveness.
2. FO will evaluate occupant feedback to determine whether updates to cleaning procedures are necessary.

## **Tracking plan for staffing and overall performance**

1. Staffing plans will be based on the number of Preventive Maintenance (PM) daily work orders required to clean the buildings to the desired and budgeted APPA Cleaning Levels.
2. Using Reliability Centered Maintenance (RCM) methodologies, Housekeeping PMs are established for each Housekeeper in each building covered by HK&RS. These PMs are inclusive of all Housekeeping Standard Operating Procedures (SOPs) and the individual building cleaning requirements. Housekeeping PMs, as reflected in the FO CMMS (AiM), provide the accountability needed to do continuous audit of performance and the resulting cleaning services provided by HK&RS.
3. The FO Reliability Group keeps all training records for the unit.
4. All FO USPS Non-Exempt staff are required to use the Kronos timekeeping system. Kronos will reflect the time record of hours worked by our Housekeeping staff. Oversight is provided by the various FO units and the F&S Human Resources Payroll office.
5. All new HK&RS staff receive onboarding training for UCF and F&S new employee orientation. FO follows the standardized On-Boarding Checklist, which includes training and review of all Housekeeping SOPs, as well as the PMs (job assignments in the AiM CMMS) that will be used by the new employees.

## **Purchasing guidelines: Sustainability criteria for cleaning products and materials**

1. Cleaning products must meet one or more of the following standards:
  - a. Green Seal GS-37 for general-purpose, bathroom, glass, and carpet cleaners used for industrial and institutional purposes
  - b. UL 2792 for cleaning and degreasing compounds
  - c. UL 2759 for hard-surface cleaners
  - d. UL 2795 for carpet and upholstery care
  - e. EPA Safer Choice Standard
  - f. 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 Safer Choice Standard requirements, as appropriate, for use patterns and marketing claims.)
- g. Green Seal GS-40 for industrial and institutional floor care products
  - h. UL 2777 for hard-floor care
2. Disinfectants, metal polish, carpet cleaners, or other products not addressed by the above standards must meet one or more of the following standards:
    - a. UL 2798 for digestion additives for cleaning and odor control
    - b. UL 2791 for drain or grease trap additives
    - c. UL 2796 for odor control additives
    - d. Green Seal GS-52/53, for specialty cleaning products
    - e. California Code of Regulations maximum allowable VOC levels for the specific product category
    - f. EPA Safer Choice Standard
    - g. 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 Safer Choice Standard requirements, as appropriate, for use patterns and marketing claims.)
  3. Disposable janitorial paper products and trash bags must meet the minimum requirements of one or more of the following programs:
    - a. EPA Comprehensive Procurement Guidelines for janitorial paper
    - b. Green Seal GS-01 for tissue paper, paper towels, and napkins
    - c. UL 175 for toilet tissue and hand towels
    - d. Janitorial paper products derived from rapidly renewable resources or made from tree-free fibers
    - e. EPA comprehensive procurement guidelines, for plastic trash can liners; and/or California integrated waste management requirements, for plastic trash can liners (California Code of Regulations Title 14, Chapter 4, Article 5, or SABRC 42290-42297 Recycled Content Plastic Trash Bag Program)
    - f. FSC certification, for fiber procurement
  4. Hand soaps and hand sanitizers must meet one or more of the following standards:
    - a. 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)
    - b. Green Seal GS-41 for industrial and institutional hand cleaners
    - c. UL 2784 for hand cleaners and hand soaps
    - d. UL EcoLogo 2783 for hand sanitizers
    - e. EPA Safer Choice Standard

### **Sustainability criteria for cleaning equipment**

1. All powered equipment must have the following features:

- a. Ergonomic design to minimize vibration, noise, and user fatigue 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 operator's ear, in order to be considered environmentally preferred.
  - b. Safeguards, such as rollers or rubber bumpers, to reduce potential damage to building surfaces
2. In addition, the applicable category-specific criteria below must be met:
  - a. 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 less than 70 dBA.
  - b. Carpet extraction equipment, for restorative deep cleaning, must be certified by the Carpet and Rug Institute Seal of Approval testing program for Deep Cleaning Extractors.
3. Powered floor maintenance equipment must be equipped with vacuums, guards, or other devices for capturing fine particulates, and must operate with a sound level of less than 70 dBA.
4. Propane-powered floor equipment must have high-efficiency, low-emission engines with catalytic converters and mufflers that meet the California Air Resources Board or EPA standards for the specific engine size, and must operate with a sound level of less than 90 dBA.
5. Automated scrubbing machines must be equipped with variable-speed feed pumps and either on-board chemical metering to optimize the use of cleaning fluids or dilution control systems for chemical refilling. Alternatively, scrubbing machines may use tap water only, with no added cleaning products.

### **Internal quality assurance/quality control processes**

1. Strategies for reducing the toxicity of the chemicals used for laundry, ware washing, and other cleaning activities.
  - a. Cleaning staff and building occupants will be supplied with safe cleaning chemicals that meet the sustainability criteria described in the purchasing guidelines listed above.
  - b. Dish soaps and laundry detergent meeting EPA Safer Choice Standard will be supplied for ware washing and laundry services.
  - c. For surface cleaning, ionized water cleaning devices (using only water) will be used as much as possible.
2. Strategies for conserving energy, water, and chemicals used for cleaning.
  - a. Manual-powered equipment and cleaning strategies will be used whenever possible to reduce the energy and water used by powered equipment and typical cleaning strategies.
  - b. Cold water will be used for any necessary disposal and/or dispensing to reduce energy used to heat hot water.

- c. The filters in vacuums and other applicable equipment will be replaced on a consistent basis, according to the equipment manual, to enable air flow and reduce the energy consumption of the equipment.
    - d. When cleaning chemicals are necessary, the operating procedures for proper chemical dilution will be followed to ensure that the minimum amount of cleaning chemicals necessary is used.
3. Tracking plan for water, energy, and toxic chemical usage
  - a. Every time a toxic chemical is used, it must be reported to the responsible party. The responsible party will record which chemical was used, where it was applied, and the reason for its use. This information will be used to track against the goal for using toxic chemicals only when strictly necessary.
  - b. All vacuum filters will be replaced on a consistent basis, according to the equipment manual. 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.
4. Goals for reducing toxic chemical usage (applies to all cleaning chemicals, including those not addressed by EQc Green Cleaning-Products and Materials).
  - a. Toxic chemicals will only be used in situations where products meeting the requirements of EQ Credit Green Cleaning-Product and Materials are unable to sufficiently clean the area, the area cannot be replaced (such as a floor tile), and represents a hazard to human health.
  - b. Performance measurement unit is based on number of uses.
5. The HK&RS unit will evaluate the green cleaning policy on a quarterly basis to evaluate progress toward the implementation goals. If any cleaning product or equipment purchases are not being recorded properly, HK&RS will inform the appropriate individuals to ensure that activities are recorded moving forward. HK&RS 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, HK&RS will revise the green cleaning policy to include additional cleaning strategies or modify existing cleaning strategies.
6. In addition, if any implementation goals are not being met, HK&RS will investigate and rectify the situation. HK&RS will evaluate whether changes are necessary in order to achieve the implementation goals.
7. Any revisions that are made to the policy will be incorporated into the next training cycle for the cleaning staff.

## REFERENCES

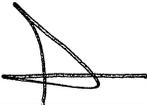
EPA Comprehensive Procurement Guideline (CPG) Program:  
<https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>

Green Seal: <http://www.greenseal.org/>

MSDS Online login: <https://www.msdsonline.com/>

The Carpet and Rug Institute: <http://www.carpet-rug.org/seal-of-approval-program.html>

UL Standards: <http://ulstandards.ul.com>

Approved By:	Date Approved:
	11/7/19
Duane Siemen Interim Associate Vice President Administration and Finance Facilities and Safety	

Revision Log

Version	Description of Changes	Date
0	Original approved policy	5/11/17
1	Revised	10/19/17
2	Revised to ensure LEED compliance	11/7/19