

RADFORD UNIVERSITY

Facilities Management

Green Cleaning Program

January-22

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1.0 Introduction/Scope

As a part of the Facilities Management organization, the Radford University Housekeeping Department is committed to reducing its impact on the environment while providing safe and sanitary facilities for university students, faculty and staff. The Housekeeping Department has implemented this comprehensive Green Cleaning Program to complement its staff and provide awareness to university constituents about the practices and products in place.

2.0 Program statement/Goals

The goals of this policy are to reduce 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 and to balance these needs with the cost and quality (i.e. product effectiveness of the managed systems to provide a sustainable approach to Housekeeping services).

Radford University Housekeeping Department utilizes strategies for conserving energy, water, and chemicals used for cleaning. Cold water will be used for any necessary cleaning/rinsing of equipment as opposed to hot water to reduce energy used to heat hot water. Cleaning chemicals are dispensed through dilution control centers to maximize resource efficiency as well proper dilution rates for most sustainable product usage. The Housekeeping Department also utilizes ready to use (RTU) products in special circumstances. Chemical concentrates that require manual dilution are only used in specialized circumstances where current products are unable to sufficiently clean and/or disinfect the target surface/area with the desired result or desired time. The University is committed to maintaining a high standard of cleanliness as well as optimizing indoor air quality. Radford University developed guidelines to ensure that the replacement of any applicable equipment with vacuum functions will contain HEPA level filtration. Filters for this equipment are changed based on manufacturer specifications to enable air flow and reduce energy consumption of equipment.

Criteria and Performance Measurement:

**See pages 8-10 for criteria.*

<u>Category</u>	<u>Goal</u>	<u>Performance measurement unit</u>
Cleaning products and materials purchases	75% meet sustainability criteria*	Cost
Cleaning equipment purchases	90% meet sustainability criteria	Number of equipment items
Cleaning equipment inventory	40% of equipment in the project inventory will meet the applicable sustainability criteria	Number of equipment items in the overall inventory for the project
Non-Green chemical usage	Non-Green chemicals will only be used in situations where Green products and materials are unable to sufficiently clean the area or the finish of a space cannot be replaced (such as a floor tile), and represents a hazard to human health.	Number of uses

3.0 Responsible Parties

The responsible party for this policy is the Radford University Director of Housekeeping Services. The responsible party ensures that this policy is executed and that contracted cleaning vendors under Radford University Facility Management's control are aware of and trained on the procedures outlined in this policy. Further, the responsible party is responsible for posting the Green Cleaning Program on the Facilities Management website and encouraging policy adoption accordingly. Radford University constituents with questions may contact the responsible party for meeting. The responsible party is responsible for reviewing this policy for any significant changes on the interval specified in the quality assurance section. If updates are required to this program, the responsible party will ensure that the appropriate individuals, e.g. Sustainability Director, Environmental Health and Safety Director and direct reports of the responsible party are informed of the updates.

Roles and responsibilities of the Housekeeping Department are summarized as follows:

Director, Housekeeping Services:

Responsible for development of strategic operational plans, implementing annual objectives and ensuring effectiveness of objectives. Develops and implements strategic and operational plans for the Department to ensure effective staffing, work methods, tools and systems. Responsible for the implementation of the Radford University Green Cleaning Program.

Housekeeping Manager: Responsible to manage, coordinate and lead staff responsible for the cleaning of assigned campus buildings to Radford University Green Cleaning Program standards. Supports the Director in managing Housekeeping services and linking the Housekeeping Department with user Departments. Oversees quality assurance assessment and ensures customer service and performance objectives are met. Responsible for the implementation of the Radford University Green Cleaning Program.

Housekeeping Supervisor: Responsible for the daily supervision and performance of assigned staff. Assesses building needs and responds to customer requests. Ensures staffing shortages are covered. Monitors staff adherence to safety, Departmental and university policies and procedures. Responsible for the implementation of the Radford University Green Cleaning Program.

Sustainability Manager: Review Green Cleaning Program to ensure standards of program are compliant with LEED expectations. In coordination with the Director of Housekeeping Services, the Sustainability Manager will submit Green Cleaning Products inventory to the Sustainability Tracking, Assessment, and Rating System (STARS).

Environmental Health and Safety Director: Evaluate Green Cleaning Program as it relates to health and safety concerning university employees and constituents. In coordination with Housekeeping staff, review Safety Data Sheets for product(s) used and PPE to be used, if any, while using the product(s).

The following limitations apply to this Program:

Physical limitations: Radford University Housekeeping is responsible for the cleaning of main campus buildings under University operational control. Exclusions include certain areas of buildings operated by University dining contractor staff, Athletic training staff, Library staff, Information Technology Services staff, Student Recreation and Wellness staff. Radford University Housekeeping also provides limited services to medical exam rooms and lab spaces which are maintained by the appropriate and appointed personnel.

4.0 Procedures and Strategies for Implementation

Hard floor and carpet cleaning and maintenance

- Hard floors, including terrazzo, tile, concrete, composite LVT, rubber and wood surfaces, will be cleaned with sustainable cleaning products.
- To minimize chemical use, the Radford University Housekeeping Department modified operations to change the frequency of floor care to an as needed basis as evaluated by Housekeeping Management. This modification allowed for the maximization of the floor's longevity, thereby conserving cleaning and floor restoration materials and minimizing occupants' and staff exposure.
- Carpets will be vacuumed with vacuum cleaners that meet the sustainability criteria listed below in this Program.
- Carpets are inspected for stains and other damages. Routine and restorative cleaning services are scheduled. When carpet extraction equipment must be used, methods to reduce chemical usage will be implemented.

Entry Way Systems

- Entryways and entrances into the building are furnished with walk-off mats to assist in improving indoor air quality as well as reducing slip, trip and fall incidents.

Protection of vulnerable occupants during cleaning

- Housekeeping Services should be notified of occupant vulnerabilities or special accommodations. Employee or student occupants that require special accommodation for cleaning or other services should process these requests with Human Resources and the Dean of Students Office respectively, as to maintain the privacy of employees and/or students. Human Resources and the Dean of Students Office then reports these needs and accommodations to necessary departments (i.e. Housekeeping Services).
- Vulnerable occupants may include women who are pregnant, children, elderly occupants, and individuals with asthma, allergies, or other sensitivities.
- To the extent practicable, only sustainable cleaning products will be used. Please refer to the goals and tracking sections of this policy for additional information.

Disinfectant and sanitizer selection and use

- Only hand soaps and hand sanitizers that meet at least one of the sustainability criteria listed under the purchasing guidelines will be considered to meet the requirements of this policy.
- Hand sanitizers will be placed near high touch surface points and/or high traffic areas (elevators, classrooms, etc.) the building for the use of occupants.
- Only disinfectants meeting the sustainability criteria listed below will be considered for purchase to meet the requirements of this policy.
- Only university approved cleaning chemicals may be used by non-Housekeeping personnel. Such personnel must be trained by the office of Environmental Health and Safety. University colleges and departments must notify Facilities Management and Environmental Health and Safety of any cleaning material or chemical's intended use for consideration.
- As a part of orientation for new Housekeeping staff, training will be required to follow dilution strategies for disinfectants.

Safe storage and handlings of cleaning chemicals, including spill management

- Cleaning chemicals will be stored in Housekeeping closets to prevent access to other building occupants.
- Housekeeping staff are trained on the various hazards of different chemicals and bodily fluid spills to address spills.
- Spills are cleaned and handled according to the manufacturer safety data sheets provided by the manufacturer.
- Spills are handled carefully. As soon a spill of a non-sustainable product occurs, the responsible party must be notified. Environmental Health and Safety are also to be notified. If the spill occurs in an area to which typical building occupants have access, the area will be closed off and the spill will be communicated to the appropriate personnel (EHS, EMS).
- Safety data sheets for cleaning chemicals used in the building will be retained and clearly displayed in Housekeeping offices.

Strategies for conserving energy, water, and chemicals used for cleaning

- Every effort will be made to conserve water and energy during cleaning. Certified Green Products are utilized except in case of special circumstances when building finishes are not modern and require specialized cleaning chemicals or in cases of virus and bacteria outbreaks, i.e., pandemic.
- Equipment meeting the performance standards and metrics of this Program will be used to reduce the energy and water consumed.
- Cold water will be utilized to reduce energy used to heat hot water.
- Vacuum filters are changed as required per manufacturer instructions to reduce the energy consumption of the equipment.
- When cleaning chemicals are necessary, the operating procedures for chemical dilution will be followed to ensure that the appropriate amount of cleaning chemicals necessary is used.

Strategies for promoting hand hygiene

- Restrooms are furnished with certified green hand soap product in mounted dispensers, and EcoLogo, FSC, or Green Seal certified paper towels in mounted dispensers.
- Hand sanitizers are available throughout each building on main campus.
- Housekeeping staff are trained on appropriate hand hygiene protocols.

Strategies for reducing the toxicity of the chemicals used for laundry:

- Where necessary, Housekeeping Services will supply building occupants with a Green Seal certified or EPA Safer Choice laundry detergent when available, or other preferred products when those are unavailable. Other products may include but are not limited to, USDA Certified Biobased, dye free, fragrance free and hypoallergenic options.
- Signage for laundry machine usage and instructions for detergent will be posted or readily available at designated sites.

5.0 Staffing and Training

Tracking plan for staffing and overall performance

- To meet cleaning objectives within the building, minimum staffing requirements are met. Factors such as staffing levels, occupancy rates, seasonal variations and other considerations are considered when adjusting the staffing plan.
- APPA level II standards of cleanliness are maintained.
- Dilution chemical usage per square foot report.
- Under typical conditions, total cleaning staff time shall be not less than eight hours per day, with the exception of small facilities requiring less time. Generally, ~80 staff members work eight hours per day to meet these requirements for Radford University main campus facilities.
- In the event of staffing shortages in specific buildings, the responsible party temporarily reassigns Housekeeping staff to meet the needs of the affected building(s).
- Housekeeping staff are required to report to a Housekeeping office when they arrive at work. Housekeeping Supervisors and Managers retain attendance records to ensure that each building is sufficiently staffed.
- Housekeeping Managers maintain staff training records of Housekeeping staff to ensure that this Program's goals are met.

Training

Housekeeping staff and leadership receive initial and annual training. This includes: EHS (Environmental Health and Safety) training which addresses, at minimum, hazards associated with the use, disposal and recycling of cleaning chemicals, dispensing equipment and packaging.

Training Topics

- Proper donning and doffing of personal protective equipment (PPE).

- Proper dilution center operation.
- Appropriate use of cleaning materials, i.e. color-coded mop heads and microfiber cloths.
- Appropriate maintenance and proper operation of housekeeping equipment.
- Proper cleaning procedures for space types, i.e. bathrooms, classrooms, offices, etc.
- Proper lifting techniques.
- Annual training on OSHA standards, Blood Borne Pathogen, HAZCOM, lead, silica and asbestos training presented by the Environmental Health and Safety Office.
- All workers shall receive 40 hours of training annually.

Training records certifying a staff member's specific training and date shall be documented. These acknowledgements will be kept on site in the Housekeeping Manager's offices as well as Environmental Health and Safety Office for annual HAZCOM training. A log will be maintained displaying the topic and date of the training.

6.0 Performance Assessment

Housekeeping Quality Assessment

- Housekeeping quality assessments will be conducted to evaluate cleanliness. As a part of the assessments, Housekeeping Managers and Supervisors will seek feedback from Housekeeping staff and building occupants to ensure Program adoption and customer satisfaction.
- Additionally, annual assessments of each main campus building will be conducted and led by the responsible party. The responsible party is responsible for following up with Housekeeping Managers to provide additional training and/or guidance if necessary.

7.0 Purchasing Guidelines

Sustainability Criteria for Cleaning Products and Materials

Cleaning products must meet one or more of the following standards [or a local equivalent for projects outside the U.S.]:

- Green Seal GS-37, for general-purpose, bathroom, glass and carpet cleaners used for industrial and institutional purposes;
- UL EcoLogo 2792 (formerly CCD 110), for cleaning and degreasing compounds;
- UL EcoLogo 2759 (formerly CCD 146), for hard-surface cleaners;
- UL EcoLogo 2795 (formerly CCD 148), for carpet and upholstery care;
- Green Seal GS-40, for industrial and institutional floor care products;
- UL EcoLogo 2777 (formerly CCD 147), for hard-floor care;
- EPA Safer Choice Standard; 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 Safer Choice Standard 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 [or a local equivalent for projects outside the U.S.]:

- UL EcoLogo 2798 (formerly CCD 112), for digestion additives for cleaning and odor control;
- UL EcoLogo 2791 (formerly CCD 113), for drain or grease trap additives;
- UL EcoLogo 2796 (formerly CCD 115/107), 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; 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 Safer Choice Standard requirements, as appropriate for use patterns and marketing claims).

Disposable janitorial paper products and trash bags must meet the minimum requirements of one or more of the following Programs [or a local equivalent for projects outside the U.S.]:

- EPA comprehensive procurement guidelines, for janitorial paper;
- Green Seal GS-01, for tissue paper, paper towels and napkins;
- UL EcoLogo 175 Sanitary Paper Products, for toilet tissue and hand towels
- Janitorial paper products derived from rapidly renewable resources or made from tree-free fibers;
- FSC certification, for fiber procurement;
- 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).

Hand soaps and hand sanitizers must meet one or more of the following standards [or a local equivalent for projects outside the U.S.]:

- 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 (formerly CCD 104), for hand cleaners and hand soaps;
- UL EcoLogo 2783 (formerly CCD 170), for hand sanitizers;

- EPA Safer Choice Standard.

[For projects outside the U.S., a local equivalent is any Type 1 eco-labeling Program as defined by ISO 14024: 1999 developed by a member of the Global Ecolabelling Network may be used in lieu of Green Seal or UL standards.]

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 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 be equipped with such as 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.

8.0 Quality Assurance

Quality assurance is a process of continuous improvement. Housekeeping Quality Assessments are a critical part of the process. On a daily basis, Facilities Management Work Control offers students, faculty and staff alike the opportunity to report emergencies, hazards or report concerns. Housekeeping staff can be dispatched to respond to reports.

The responsible party will evaluate the results of the Quality Assessments to determine whether the campus is sufficiently cleaned and whether the standard cleaning procedures are being properly

executed. As necessary, the responsible party will revise the Green Cleaning Program to include additional cleaning strategies or modify existing cleaning strategies. Any revisions that are made to the Program will be incorporated into the next training cycle for Housekeeping staff.

The responsible party shall evaluate the success of the Green Cleaning Program prior to the end of each calendar year. This evaluation may include producing and providing reports on an annual basis to senior management.

9.0 Occupant Feedback

A system for gathering occupants' feedback about Facilities Management and Housekeeping services is established and is available for campus participation on an annual basis. During student Quest programs and conference services events, surveys and table tents are stationed in each room for feedback and contact information for questions.

10.0 Record Keeping

A database shall be kept for all powered cleaning equipment, chemical and material purchases to document the date of purchase and all repair and maintenance activities. When cleaning equipment replacement is necessary, acquisition dates and product information shall be retained to demonstrate that newly acquired equipment complies with the specifications required as a part of this Program.

11.0 Time Period

This Program shall continue until updated or replaced by an approved subsequent green cleaning Program.