

TYPE:	Administration
TITLE:	Green Cleaning – Centre for Collaborative Education
NO.:	ADMIN-260
RESPONSIBILITY:	Chief Administrative Officer
APPROVED BY:	Durham College Leadership Team
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1. Introduction

This policy and procedure have been created to support the Centre for Collaborative Education (CFCE), as it aims to reduce building occupants and maintenance personnel's exposure to potentially hazardous chemical, biological, and particle contaminants, which adversely affect air quality, human health, building finishes, building systems, and the environment.

This policy and procedure have been written to meet the Leadership in Energy and Environmental Design (LEED)® Canada EB: Operations and Maintenance requirements, should the property intend to pursue LEED certification. Therefore, sections have been copied directly from the LEED Canada for Existing Buildings: Operations and Maintenance Reference Guide, 2009.

This policy and procedure affects the base building maintenance staff and cleaning contractor's work.

The following boundaries apply to this policy and procedure:

Physical boundaries: All interior spaces, including tenants and base building activities covered under the programmatic boundaries.

Programmatic boundaries:

Plan for High-Performance Cleaning: Applies to the standard operating procedures (SOPs) for purchase, use, maintenance, and disposal of all cleaning materials and equipment used within the building. In addition, this Plan requires strategies for cleaning chemicals' safe handling and storage, strategies for promoting hand hygiene, maintenance staff training, and provisions for collecting occupant feedback and continuous improvement of green cleaning practices.

Plan for Cleaning Products and Materials Purchases: Applies to all cleaning products and materials' used and purchased for use within the building.

Plan for Cleaning Equipment: Applies to all powered cleaning equipment's use and purchased for use within the building.

This policy and procedure shall not supersede applicable local regulatory requirements.

2. Purpose

The purpose of this policy and procedure is to reduce building occupants and maintenance personnel's exposure to potentially hazardous chemical, biological, and particle contaminants, which adversely affect air quality, human health, building finishes, building systems, and the environment.

3. Definitions

Refer to [Durham College's Standard Definitions](#).

4. Policy statements

4.1. With respect to the CFCE, Durham College shall ensure compliance with the minimum sustainability requirements as outlined in section 5 of this document and adhere to the appropriate standards defined by the following LEED guidelines: :

- 4.1.1. 90% of all disposable janitorial paper and trash bags products shall meet the minimum program requirements, as outlined in Section 5.2;
- 4.1.2. 30% of the total annual purchases of cleaning and maintenance products, excluding janitorial paper products shall meet the minimum program requirements, as outlined in Section 5.2
- 4.1.3. 100% disinfectants, metal polish, floor finishes, strippers or other products not covered above, shall meet the minimum program requirements, as outlined in Section 5.2.
- 4.1.4. 100% hand cleaners and soaps shall meet the minimum program requirements, as outlined in Section 5.2.
- 4.1.5. 20% of the of cleaning equipment used on site shall meet the minimum program requirements, as outlined in Section 5.3
- 4.1.6. 100% of the total purchases of new cleaning equipment shall meet the minimum program requirements, as outlined in Section 5.3

5. Procedure

5.1. High Performance Cleaning.

Potentially harmful or irritating chemical use should be reduced or eliminated to reduce impact on indoor air quality and occupant health and safety. (Details on compliant products can be found in section 5.2 and Appendix E.)

Material Safety Data Sheets (MSDSs) for all cleaning products shall be available to cleaning staff, and stored with cleaning products. Proper storage and handling of cleaning chemicals is required and protective equipment shall be worn when these products are used.

The following outlines the procedures to be maintained:

5.1.1. Guidance for Cleaning Product and Equipment Use

For all cleaning products, materials, and equipment, the cleaning contractor will submit product details and/or MSDSs to management for review and approval before using the product. These submissions will be kept on site.

When applicable, the following guidelines and requirements for using cleaning products and materials will be followed:

- Maintenance staff shall clean all flooring to increase the life of g surfaces.
- A sample Tracking Form for Floor Maintenance is provided in Appendix C.
- Concentrated products will be used with appropriate dilution controls. Where chemicals are necessary, they will be dispensed from portion-controlled, closed dilution systems.
- Floor coating products which are free of zinc will be used, wherever possible.
- Cleaning solutions and by-products (e.g. floor stripping waste, empty chemical containers) shall be disposed of according to details specified in product literature and according to relevant laws and regulations.
- When appropriate and hygienic, reuse wipes and towels shall be used to clean surfaces.
- Prior to beginning any janitorial activities using mechanized equipment (e.g. floor cleaners, buffers, wax strippers) staff will verify the equipment is operating properly. This will increase the device's efficiency and ensure the building surfaces are not damaged by faulty equipment.

The following are not required, but are recommended measures:

- Use core-less paper products.
- Use equipment that can be cleaned with water only, thereby reducing cleaning chemicals and packaging.
- Use floor buffing pads that eliminate the use of chemical stripping agents when preparing a floor for refinishing.

The cleaning contractor, in cooperation with management, will be responsible for ensuring all the cleaning staff are aware of and comply with these guidelines.

5.1.2. Storage and Handling of Cleaning Chemicals

Cleaning products and materials purchasing standards can be found in section 5.2 and Appendix E. Rubber gloves, masks and other required protective equipment shall be available for individuals using these products regularly.

Janitorial closets shall not to be used for mixing or storing harmful chemicals. Harmful chemicals shall be kept in a well ventilated area where such chemicals are clearly present. Employees working in this area are to wear appropriate safety attire when accessing chemicals and should ensure that all areas are wiped down before and after chemical use to avoid cross contamination. Non-harmful chemicals are to be stored in janitorial closets in a manner that limits opportunities for accidental spills or leaks. All chemical storage containers shall be checked for leaks or other imperfections before use. Containers should be stored at accessible heights, and where containers must be stored above shoulder height, a step ladder shall be used to reach the container.

Appropriately plumbed containment drains or other means shall be used for proper disposal of hazardous wastes; cleaning staff are expected to use these appropriately.

In the event of a hazardous spill or mishandling incident, the cleaning contractor must:

- Read MSDS for warnings, disposal guidelines and emergency procedures for specific chemicals. A copy of all MSDS shall be provided to the operations manager for future reference and use.
- Contact trained senior management if necessary.
- Use recommended personal protective equipment.

- Extract pollutants through appropriate cleaning to prevent harm to occupants.
- Dispose of spilled waste in properly labeled containers.
- Ensure timely and safe pick-up of hazardous waste.

5.1.3. Hand Hygiene

Management promotes hand hygiene shall implement the following measures:

- An effective communication plan will be developed to inform occupants of the importance of hand hygiene (e.g. signage, newsletters, emails, etc.);
- Hands-free, waterless hand sanitizer dispensers will be located at strategic locations throughout the building ;
- Hands free dispensers for janitorial paper products will be considered, compared to levers and cranks that can promote the spread of germs; and
- Hands free faucets will be installed in washrooms and other kitchen areas.

Hand soaps shall not contain antimicrobial agents, except where required by health codes and other regulations.

5.1.4. Protection of Vulnerable Occupants During Cleaning

Management is committed to implementing strategies to protect those who are more sensitive to cleaning chemicals. 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 policy, found in the appendix 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.

5.1.5. Staffing

An appropriate staffing level and division of responsibilities will be developed by the cleaning contractor in coordination with management. Staffing should be allocated to ensure that the Association of Physical Plant Administrator's (APPA) Custodial Staffing Guidelines cleanliness score is maintained, including more frequent and intensive cleaning of areas that accumulate greater amounts of contaminants, including building entryways, bathrooms, food preparation and dining areas.

5.1.6. Training and Retraining

The cleaning contractor will be responsible for initial and ongoing cleaning and janitorial staff training to maintain knowledge of correct procedures for their expected tasks, the intended cleaning materials and equipment, and on safety, tools, techniques, and pertinent environmental standards.

New hires, being employed with the cleaning contractor for less than one year, shall receive at least 12 hours of training within two months of initial employment, followed by 24 hours of in-service training, continuing education, and/or professional development opportunities. Senior employees, employed with the cleaning contractor for more than one year, shall have at least 24 hours of in-service training and/or education on an annual basis.

All cleaning chemical, materials, and equipment suppliers must provide training materials on their products' hazards and proper use. These documents are made available to all staff using them.

Training will include, but is not limited to:

- Green cleaning techniques and details on proper handling, use and storage of products;
- The environmental and health issues of the products and equipment being used;
- The requirements for proper product (and associated packaging) disposal;
- Dispensing equipment and packaging;
- Minimizing exposure and impacts when managing hazardous spills and similar incidents;

- Addressing custodial staff turnover and rotation; and
- Cleaning by outsourced services.

Retraining of facilities personnel should cover all elements above as required.

Training and retraining shall be documented by the cleaning contractor and reviewed by management using a tracking form that contains all information as the sample provided in Appendix A.

5.1.7. Standard Operation Procedures (SOPS)

The cleaning contractor is required to create standard operating procedures (SOPs) that form the basis for training and cleaning, which management will review and approve. These SOPs should address effective cleaning, hard floor maintenance, and carpet maintenance implementation, management & auditing.

Overall, the SOPs should reflect management's green cleaning principles, which include:

- Reduced or no use of potentially harmful and irritating chemicals;
- The removal or elimination of dirt, dust, and other contaminants;
- The protection and preservation of surfaces during cleaning (particularly hard floors and carpets); and
- Proactive strategies to reduce contaminant infiltration at source (walk-off mats or grates that are at least 3 meters long are installed at all public building entrances).

The procedures should provide guidance on how the cleaning contractor will meet each section of this policy. A copy of the SOPs and updates are to be provided to management as they are created. These are to be included in Appendix D.

5.1.8. Occupant Feedback

Management, in coordination with the cleaning contractor, utilizes the Tenant Survey System to collect building occupant's feedback on overall building cleanliness, hygiene, product use, and overall performance of custodial services.

5.1.9. Performance Measurement

- a) Management requires that all facilities it owns or manages will achieve and maintain a score of 3 or less, following the Association of Physical Plant Administrator's (APPA) Custodial Staffing Guidelines.
- b) The Cleaning Contractor is responsible for documenting compliance with management's Green Cleaning policy and the aforementioned strategies and procedures. The following documents need to be provided and/or completed; relevant tracking forms are included in the Appendices:
- c) Audits: Management will conduct random audits to ensure that the compliant low environmental impact cleaning products and materials, that have been purchased, are being used. These random inspections will include verification that MSDS sheets are provided in janitorial closets, as well as to confirm proper cleaning products are being purchased and used. The audit results will be presented in a format similar to that provided in Appendix B.
- d) Task Frequency and Staffing Plan: The overall building cleanliness is to be reviewed quarterly by the Property Manager. The staffing plan and task frequency should be revised based on the results of this review.
- e) Contracted Cleaning Staff Training and Retraining: The cleaning contractor is responsible for documenting annual cleaning staff training (property and contracted cleaning staff), within two months of initial hire, and on introduction of new products or equipment as maintained in the sample training tracking form found in Appendix A.
- f) The cleaning service provider shall provide training to all staff that operates at the building on the hazards of use, disposal and recycling of cleaning chemicals, dispensing equipment and packaging, and procedures to minimize exposures and impacts when managing spills and similar incidents.
- g) This shall be done by way of their introductory orientation training and during regularly scheduled toolbox meetings. These regularly scheduled sessions shall include retraining in green cleaning techniques and products, and address issues relating to custodial staff turnover and rotation, and cleaning by outsourced services.
- h) Tracking Form – Floor Maintenance (example provided in Appendix C)

5.1.10. Recommended Resources

The standards referenced within this Plan can be found in Appendix E, and at the following websites:

UL Environment - <http://industries.ul.com/environment>

EcoLogo – Environmental Choice - <http://www.ecologo.org/>

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

International Sanitary Supply Association - www.issa.com

US EPA Environmentally Preferable Purchasing
<http://www.epa.gov/epp/>

5.2. Cleaning Products and Materials

5.2.1. Applicable Standards

All cleaning products, materials and equipment including chemical dilution systems shall comply with the standards outlined below.

Cleaning and hard floor/carpet products:

- Green Seal GS-37 for General-Purpose, Bathroom, Glass, and Carpet Cleaners Used for Industrial and Institutional Purposes.
- UL 2792 Biologically-based Cleaning and Degreasing Compounds (Formerly Environmental Choice CCD-110 for Cleaning and Degreasing Compounds).
- UL 2759 Hardsurface Cleaners (Formerly Environmental Choice CCD-146 for Hard Surface Cleaners).
- UL 2795 Carpet and Upholstery Cleaners (Formerly Environmental Choice CCD-148 for Carpet and Upholstery Care).

If the above standards are not applicable for a specific product category (e.g., for products such as disinfectants, metal polish, floor finishes or strippers), products shall meet one or more of the following programs for the appropriate product category:

- Green Seal GS-40 for Industrial and Institutional Floor-Care Products.
- UL 2798 Biological Digestion Additives for Cleaning and Odor Control (Formerly Environmental Choice CCD-112 for Digestion Additives for Cleaning and Odor Control).

- UL 2791 Drain and/or Grease Trap Additives – Alternative (Formerly Environmental Choice CCD-113 for Drain or Grease Traps Additives).
- UL 2796 Odor Control Additives (Formerly Environmental Choice CCD-115 for Odor Control Additives).
- UL 2777 Hard Floor Care Products (Environmental Choice CCD-147 for Hard Floor Care).
- California Code of Regulations maximum allowable VOC levels for the specific product category.

Disposable janitorial paper products and trash bags:

- U.S. EPA Comprehensive Procurement Guidelines for Janitorial Paper and Plastic Trash Can Liners.
- UL 126 Plastic Film Products (Formerly Environmental Choice CCD-126 Janitorial Paper and Plastic Trash Can Liners).
- Green Seal GS-09 for Paper Towels and Napkins.
- Green Seal GS-01 for Tissue Paper.
- UL 175 Sanitary Paper Products (Formerly Environmental Choice CCD-082 for Toilet Tissue and Environmental Choice CCD-086 for Hand Towels).
- Janitorial paper products derived from rapidly renewable resources or made from tree-free fibers.

Hand soaps:

- Green Seal GS-41, for industrial and institutional hand cleaners.
- UL 2784 Hand Cleaners (Formerly Environmental Choice CCD-104, for hand cleaners and hand soaps).
- No antimicrobial agents (other than as a preservative) except where required by health codes and other regulations (i.e., food service and health care requirements).

To reduce the cleaning products and trash bag's environmental impacts, the following performance metrics are to be met:

- 90% of all disposable janitorial paper and trash products (on a cost basis) must meet the minimum program requirements listed above.
- 30% of all purchased cleaning and maintenance products must meet approved standards.

5.2.2. Performance Measurement

The following products must meet the minimum sustainability requirements outlined in the Cleaning Products and Materials section above (on a cost basis):

- 90% of all disposable janitorial paper and trash bags products
- 30% of the total annual purchases of these cleaning and maintenance products, excluding janitorial paper products;
- 100% disinfectants, metal polish, floor finishes, strippers or other products not covered above;
- 100% hand cleaners and soaps.

The Cleaning service provider is responsible for demonstrating implementation and documenting compliance with this policy and associated plans. All information included in the sample tracking forms (Appendix G) needs to be provided for each cleaning product purchased.

5.3. Cleaning Equipment

5.3.1. Modern janitorial equipment is often better for the environment and its operators' health and comfort. Non-compliant janitorial equipment currently in use will be upgraded to meet the Sustainable Cleaning Equipment Program requirements upon replacement, or as financially feasible.

5.3.2. Management shall engage a cleaning contractor to implement a cleaning program that meets this policy and procedures requirements as part of standard practice.

5.3.3. Applicable Standards

All cleaning equipment will comply with the standards outlined below:

- Vacuum cleaners will meet the requirements of the Carpet and Rug Institute “Green Label” Testing Program: Vacuum Cleaner Criteria and will be capable of capturing 96% of particulates 0.3 microns in size and operate with a sound level less than 70dBA.
- HEPA filters shall be installed on vacuums.
- Carpet extraction equipment used for deep cleaning carpets shall be certified by the Carpet and Rug Institute’s “Seal of Approval” Testing Program for deep-cleaning extractors.
- Powered maintenance equipment, including floor buffers and burnishers, shall be equipped with vacuums, guards and/or other devices for capturing fine particulates, and shall operate with a sound level less than 70 dBA.
- Propane-powered floor equipment shall have high-efficiency, low-emissions engines with catalytic converter and mufflers that meet California Air Resources Board or U.S. Environmental Protection Agency standards for the specific engine size. Applicable equipment shall operate with a sound level of less than 90 dBA.
- Automated scrubbing machines shall be equipped with variable-speed feed pumps to optimize cleaning fluid use. Alternatively, the scrubbing machines shall use only tap water with no added cleaning products.
- Battery-powered equipment shall be equipped with environmentally-preferable gel batteries.
- Where appropriate, active micro fiber technology shall be used to reduce cleaning chemical consumption and prolong the life of disposable scrubbing pads.
- Powered equipment shall be ergonomically designed to minimize vibration, noise and user fatigue.
- Equipment shall be designed with safeguards, such as rollers or rubber bumpers, to reduce potential damage to building surfaces.

Existing equipment will be used until the end of its useful life. The standards given in this plan will apply to any new equipment.

The manufacturer or the cleaning contractor shall regularly maintain janitorial equipment to ensure optimal performance during its lifetime.

Equipment is to be checked before use to prevent damage to building surfaces that can occur from malfunctions.

A log will be kept for all powered housekeeping equipment to document equipment purchase date, and all repair and maintenance activities associated with it. A tracking form is given in Appendix G and shall include the following information:

- Equipment type
- Manufacturer
- Date of Purchase
- Cost
- Compliance
- Sustainability Criteria
- Date of Repair
- Details of Repair

5.3.4. Performance Measurement

At least 20% of the janitorial equipment used will satisfy the requirements outlined in this document; and all future purchases will comply with these requirements.

The cleaning contractor is responsible for demonstrating implementation and documenting compliance with this document. The following documents need to be provided and/or completed:

- Tracking Form – Equipment Repair and Maintenance (Appendix H);
- A log for all powered cleaning equipment showing the purchase date; and
- Vendor specification sheets for new and existing powered cleaning equipment, documented as meeting the requirements.

6. Roles and responsibilities

6.1. The Chief Administrative Officer is responsible for ensuring this policy and procedure is fully implemented.

6.2. The cleaning contractor is responsible for documenting compliance with the aforementioned strategies and procedures for management's review and for preparing tracking forms to be submitted to management at the end of each month, ensuring that the required documentation is readily available.

- 6.3. Management is responsible for reviewing all submitted tracking forms quarterly and verifying that the measures are meeting the program requirements. Management will solicit feedback on new technologies and potential procedural improvements from their contracted cleaning staff for incorporation into this program and future cleaning contracts.
- 6.4. Management is responsible for purchasing compliant products, materials and equipment and for completing and providing the Property Manager with the documentation required by this policy and procedure.
- 6.5. Management's building operations manager or designate is responsible for reviewing the service provider's documentation and determining whether it conforms to this policy and procedure's requirements. Management will advise their contractors of required changes to comply with the standards outlined above.

7. Accessibility for Ontarians with Disabilities Act considerations

Accessibility for Ontarians with Disabilities Act (AODA) standards have been considered in the development of this policy and procedure and it adheres to the principles outlined in the College's commitment to accessibility as demonstrated by the Accessibility Plan (ADMIN-203).

8. Non-compliance implications

Consequences of non-compliance with this policy and procedure could result in the loss of LEED certification.

9. Communications plan

- A message will be posted on ICE alerting employees when new or revised policies and procedures are added to ICE.
- A message will be posted on MyCampus alerting students when new or revised policies and procedures are added.

10. Related forms, legislation or external resources

None.

APPENDEX D

See following pages, inserted by green cleaning contractor

APPENDIX E

See following pages for Green Seal Environmental Standard for Industrial and Institutional Cleaners (GS-37).

APPENDIX E

Products which meet Underwriters' Laboratories (UL) requirements for cleaning products can be found on the UL website: <http://productguide.ulenvironment.com/QuickSearch.aspx>

The UL standards are catalogued and can be purchased using the website below:
<http://industries.ul.com/environment/certificationvalidation-marks/ecologo-product-certification>

APPENDIX E

See following pages for Regulation for Reducing VOC Emissions from Consumer Products (September 2001), Title 17, California Code of Regulations, Division 3, Chapter 1, Subchapter 8.5, Article 2

APPENDIX E

See following pages for EPA Comprehensive Procurement Guidelines (April 2004)

APPENDEX F1 Tracking Form – Cleaning Products Purchases

Address/Project:		Log No.:	
Completed by:		Log Start Date:	
Company:		Log End Date:	
Telephone:			

DATE OF PURCHASE	ITEM PURCHASED	PURCHASING ENTITY	PRODUCT CATEGORY	SUSTAINABILITY CRITERIA MET	COST PER ITEM	QUANTITY PURCHASED	PRODUCT DOCUMENTATION	% OF TOTAL PURCHASE VALUE	VALUE
<i>SAMPLE</i>	<i>Brand X</i>	<i>Property Mgmt</i>	<i>Cleaning Product</i>	<i>GS-37</i>	<i>\$10</i>	<i>25</i>	<i>Yes</i>	<i>25%</i>	<i>\$250</i>

Total sustainable purchases over the performance period.

Sustainable purchases as percentage of total purchases.

The project team has provided documentation from project manufacturers or suppliers that verifies product compliance with the specified sustainability criteria for the following percentage of the purchased value of the sustainable purchases listed above (must be 30% minimum, by cost, to demonstrate compliance).

Signature of Authorized Official

Title

Date

APPENDIX F2 Tracking Form – Janitorial Paper and Trash Bag Purchases

Address:				Log No.:					
Completed by:				Log Start Date:					
Company:				Log End Date:					
Telephone:									
DATE OF PURCHASE	ITEM PURCHASED	PURCHASING ENTITY	PRODUCT CATEGORY	SUSTAINABILITY CRITERIA MET	COST PER ITEM	QUANTITY PURCHASED	PRODUCT DOCUMENTATION	% OF TOTAL PURCHASE VALUE	VALUE
SAMPLE	Brand X	Property Mgmt	Paper Towel	US EPA Guidelines	\$10	25	Yes	25%	\$250

Total sustainable purchases over the performance period.

Sustainable purchases as percentage of total purchases.

The project team has provided documentation from project manufacturers or suppliers that verifies product compliance with the specified sustainability criteria for the following percentage of the purchased value of the sustainable purchases listed above (must be 90% minimum, by cost, to demonstrate compliance)

Signature of Authorized Official

Title

Date

APPENDIX G Tracking Form – Cleaning Equipment Repair and Maintenance

Building Address/Name:		
Equipment Type:		
Manufacturer:		
Date of Purchase:		
Cost of equipment:		
Compliant with Sustainable Cleaning Equipment Standards?	<input type="checkbox"/> Yes <input type="checkbox"/> No	

SUSTAINABILITY CRITERIA			
DATE OF MAINTENANCE/ REPAIR:	MAINTENANCE/REPAIR DETAILS:	RETURNED TO SERVICE (Y/N)	INITIALS
<i>SAMPLE</i>	<i>Replacement Of Vacuum Sound Filter</i>	<i>N</i>	<i>J.S.</i>