



NORTHWESTERN
UNIVERSITY

Responsible University Official:
Vice-President, Facilities Management

Responsible Office: Facilities Management

Origination Date: January 1, 2017

Green Cleaning Policy

Policy Statement

In support of Northwestern's sustainability commitment, the following practices will save materials, reduce waste and minimize pollution, promote greenhouse gas emission reduction goals, conserve natural resources, ensure compliance, and encourage sustainable behaviors.

The policy is intended to assist the University community, contractors and suppliers in accounting for the environmental impact associated with the lifecycle of cleaning supplies to help minimize adverse social and environmental effects related to the production, transportation, use and disposal of cleaning materials.

Specifically, it addresses purchasing sustainable cleaning, hard-floor and carpet products, and entryway systems; procuring sustainable cleaning equipment; developing and implementing standard operating procedures for effective cleaning; promoting and improving hand hygiene; developing guidelines for handling cleaning chemicals; developing staffing and employee training requirements; collecting and addressing occupant feedback; and establishing procedures for use of chemical concentrates and dilution systems.

Reason for Policy/Purpose

The policy is intended to assist the University community, contractors and suppliers in accounting for the environmental impact associated with the lifecycle of cleaning supplies to help minimize adverse social and environmental effects related to the production, transportation, use and disposal of cleaning materials.

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Who Approved This Policy

Facilities Management
sustainNU
Student Affairs

Who Needs to Know This Policy

Custodial, sustainNU, Facilities Management, Student Affairs

Website Address for This Policy

Not yet available

Contacts

If you have any questions on the Green Cleaning Policy, you may:

- i. Call sustainNU at 847-467-4286, or
- ii. Send an e-mail to sustainability @northwestern.edu

Definitions

Green Cleaning:	Using cleaning products and employing cleaning practices that have lower environmental impacts than conventional products and practices.
Indoor air quality (IAQ):	The quality of the air in an enclosed space, which affects the health and well-being of building occupants.
Volatile Organic Compounds (VOC):	Organic chemical compounds (often found in cleaning supplies) whose composition makes it possible for them to evaporate under normal indoor atmospheric conditions of temperature and pressure. VOCs include a variety of chemicals, some of which may have short- and long-term adverse health effects.

Policy/Procedures

The Green Cleaning Policy and Training Program applies to cleaning procedures, material purchases, equipment purchases, and services in all buildings and areas within the Northwestern

University campus, including functional spaces (offices, classrooms, residences, etc.) as well as public restrooms, lounge and study rooms, public hallways and pathways, computer rooms, kitchenettes, stairwells, etc. This policy includes the grounds associated with Northwestern University, extending to the property line, including cleaning of hardscape and the building exterior.

Laboratories should refer to the Office of Research and Safety guidelines for laboratory equipment cleaning procedures located online at <http://www.offices.research.northwestern.edu/ors/>.

This policy covers:

Cleaning strategies for:

- Hard floor, carpet cleaning and maintenance
- Protection of vulnerable occupants during cleaning
- Disinfectant and sanitizer selection and use
- Safe storage and handling of cleaning chemicals, including spill management

Performance metrics and strategy development:

- Reductions in water and energy use, and chemical toxicity
- Green cleaning products procurement
- Green cleaning equipment procurement
- Low or no Volatile Organic Compounds (VOC)

Staffing and training plans:

- Staffing requirements and contingency for staffing shortages
- Timing and frequency of staff training

Goals

1. Purchase cleaning, hard floor and carpet care products that meet program criteria.
2. Maintain appropriate standard operating procedures and guidelines for critical tasks.
3. Train all employees to be familiar with green cleaning practices and processes, including proper use of chemicals and equipment.
4. Work with sustainNU to ensure cleaning products and equipment specifications meet sustainability criteria, and that staff are implementing green cleaning practices effectively. Provide opportunities for consistent feedback from building occupants.
5. Enact green cleaning procedures and policy with as little expenditure as possible and meet budgetary considerations.

A. High Performance Cleaning Program

1.Green Cleaning Product Use

Wherever feasible, cleaning products and materials, including hard floor and carpet care products, used inside and outside Northwestern's facilities shall meet the requirements of Leadership in Energy and Environmental Design (LEED) for Existing Buildings: Operations and Maintenance (EBOM) - Indoor Environmental Quality [Credit 3.3](#): Green Cleaning, Purchase of Sustainable Cleaning Products and Materials as described below.

Product types subject to these requirements include, but are not limited to, bio-enzymatic cleaners, hard floor cleaners, carpet cleaners, general purpose cleaners, specialty cleaners, odor control, disinfectants, disposable janitorial paper products and trash bags, and hand soaps.

2. Sustainability Criteria

- The cleaning products meet one or more of the following standards for the appropriate category:
 - Green Seal Certified [GS-37](#), for general-purpose, bathroom, glass and carpet cleaners use for industrial and institutional purposes
 - Environmental Choice/EcoLogo certified [CCD-110](#), for cleaning and degreasing compounds
 - Environmental Choice/EcoLogo certified [CCD-146](#), for hard surface cleaners
 - Environmental Choice/EcoLogo certified [CCD-148](#), for carpet and upholstery care

- Disinfectants, metal polish, floor finishes, strippers or other products not addressed by GS-37 or Environmental Choice/EcoLogo certified CDD-110,146, or 148 shall meet at least one of the following standards for the appropriate category:
 - Green Seal [GS-40](#), for industrial and institutional floor care products
 - Environmental Choice/EcoLogo certified [CCD-112](#), for digestion additives for cleaning and odor

- Control
 - Environmental Choice/EcoLogo certified [CCD-113](#), for drain or grease traps additives
 - Environmental Choice/EcoLogo certified [CCD-115](#), for odor control additives
 - Environmental Choice/EcoLogo certified [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 meet the minimum requirements of one or more of the following programs for the applicable product category:
 - U.S. [EPA Comprehensive Procurement Guidelines](#) for Janitorial Paper and Plastic Can Liners
 - Green Seal certified [GS-09](#), for paper towels and napkins
 - Green Seal certified [GS-01](#), for tissue paper
 - Environmental Choice/EcoLogo certified [CCD-082](#), for toilet tissue
 - Environmental Choice/EcoLogo certified [CCD-086](#), for hand towels
 - Paper products derived from rapidly renewable resources or made from tree-free fibers

- Hand soaps 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 (i.e., food service and health care requirements)
 - Green Seal [GS-41](#), for industrial and institutional hand cleaners
 - Environmental Choice/EcoLogo certified [CCD-104](#), for hand cleaners and hand soaps

3. Certification Information

Green Seal is a non-profit standard-setting organization certifying a range of products. Green Seal conducts scientific testing and on-site audits to verify that products meet recognized standards. Green Seal cleaning products are widely available and commonly specified by jurisdictions throughout the United States. Certified products can be found at Greenseal.org.



EcoLogo certifications are managed by Underwriters Laboratories, a global safety science company. Similar to Green Seal, EcoLogo certifies cleaning and other types of products based on scientific testing and third-party audits. Compliant products are listed in UL's [Sustainable Product Guide](#). EcoLogo cleaning products are widely available, and are specified by several jurisdictions throughout the country



Refer to **Appendix A** for Northwestern's approved green cleaning product list.

4. Performance Metric

The practices listed above shall be implemented to the extent practicable, with a target goal of 100 percent of the total annual purchases of these products (as measured by cost) complying with the appropriate sustainability criteria. The custodial services purchaser and/or custodial services vendor will track purchase rates on a monthly basis and report to the Custodial Manager monthly.

Refer to **Appendix B** for Northwestern's approved purchase tracker.

B. Equipment

1. Green Cleaning Equipment Use

All new equipment acquisitions for use on the Northwestern University Campus shall meet the requirements of Leadership in Energy and Environmental Design for Existing Buildings: Operations and Maintenance - Indoor Environmental Quality Credit 3.4: Green Cleaning, Sustainable Cleaning Equipment.

2. Sustainability Criteria

- All equipment
 - Powered equipment is ergonomically designed to minimize vibration, noise and user fatigue
 - Equipment is designed with safeguards such as rollers and bumpers to reduce potential damage to building surfaces
 - Electric and battery-powered equipment operate at a sound level less than 70 dBA
 - If battery-powered, equipment should use environmentally preferable gel batteries
- Automated scrubbing machines

- Equipped with variable-speed feed pumps and on-board chemical metering to optimize the use of cleaning fluids, or only uses tap water with no added cleaning products
- Operate at a sound level less than 70 dBA
- Buffers and burnishers (electric/battery-powered floor maintenance equipment)
 - Equipped with vacuums, guards, and/or other devices for capturing fine particulates
 - Electric, low-speed
 - Operate at a sound level less than 70 dBA
- Vacuums
 - Certified by the Carpet and Rug Institute (CRI) [“Seal of Approval”](#) Testing Program
 - Operate at a sound level less than 70 dBA
 - Capable of capturing 96% of particulates 0.3 microns in size
- Carpet extractors
 - Certified by the CRI [“Seal of Approval”](#) Testing Program for deep-cleaning extractors
 - Hot water extraction equipment for deep cleaning carpets capable of removing moisture such that the carpet may dry in less than 24 hours
- Propane-powered floor equipment
 - Equipped with high-efficiency, low-emission engines with catalytic converters and mufflers
 - Operates at a sound level than 90 dBA
- Re-usable/washable rags are to be utilized to clean surfaces throughout the building.
- Re-usable/washable carpet bonnets are to be utilized.
- Re-usable/washable dust and wet mops are to be utilized.
- As appropriate, all products are to be recycled appropriately.

3. **Certification Information**

Carpet and Rug Institutes (CRI) [Seal of Approval \(SOA\) program](#) tests and measures the effectiveness of cleaning products and equipment. The results help consumers make informed decisions and manufacturers improve their products. To make SOA the most advanced test possible, CRI partnered with scientists at NASA. To develop the soil compound used in the testing, hundreds of real-world samples from all over the United States were analyzed. Then, the elements that made up or closely resembled those samples were blended together to create an accurate, measurable and repeatable formula.



Refer to **Appendix A** for Northwestern’s approved green cleaning product list.

4. **Performance Metric**

All newly acquired cleaning equipment shall comply with the sustainability criteria listed above. The custodial service provider shall track the percent of equipment utilized in the building that meets the criteria, based on cost or number of pieces of equipment, with a target of 100 percent of the existing equipment meeting at least one of the sustainability criteria, unless there is no other option available. The custodial services purchaser and/or custodial services vendor will track purchase rates on a monthly basis and report to the Custodial Manager monthly.

Refer to **Appendix B** for Northwestern's approved purchase tracker.

In addition, Custodial Services will maintain an inventory of all powered cleaning equipment, including purchase date and all repair and maintenance activities. Vendor cut sheets for all equipment used on site will be made available on demand. When cleaning equipment replacement is necessary, acquisition dates and supporting documentation shall be retained to demonstrate that all newly acquired equipment complies with all appropriate sustainability specifications.

C. Cleaning Procedures

The procedures, strategies and metrics below have been adopted at Northwestern University to ensure the effective implementation of the Green Cleaning Policy.

1. General Strategies for Sustainable Cleaning

- Assess the areas to be maintained and the usage patterns.
- Determine how to meet the overall goals of the cleaning program.
- Develop a comprehensive approach to the maintenance of the building/property and determine the product specification to be used.
- Ensure that in-house maintenance staff are educated on the policies and cleaning procedures.
- Ensure that environmental, health and safety practices are compliant with applicable local regulatory requirements.
- Ensure with building management the proper disposal for all cleaning wastes.
- Development of cleaning strategies should focus on the following:
 - Efficient use of chemicals
 - Efficient use of supplies
 - Meet the hygiene and appearance goals of the building/property
 - Protect the building's occupants, systems and finishes from contaminants that adversely affect them
 - Address the frequency of cleaning in all areas (see specifications)

NOTE: The highest degree of reutilization and recycling must be applied and carried out by all contractors working on the property. To reduce waste materials that continue to have a working life must be reutilized when possible, without compromising safety. Ordering materials without additional packaging will minimize waste, packaging must be recycled. To the extent possible, construction materials must be recyclable. Refer to section four of Northwestern's Sustainable Purchasing Policy for more information about reusing products.

2. Cleaning Procedures for Specific Areas

Cleaning and safety guidelines for specific areas can be found in **Appendix A**. Specific area types addressed in the Appendix are:

- Carpet (cleaning and vacuuming)
- Custodial Maintenance Closet
- Elevator
- Entryway (walk-off mats)
- Hard Floor (cleaning, stripping, and refinishing)
- Kitchen
- Laundry
- Lounge
- Restroom (daily cleaning)
- Shower
- Stairwell

3. Entryways and Exterior Walkways

Indoor air quality and environmental impact start at the door. Appropriate matting, properly placed and maintained, will prevent indoor floor surfaces from wearing prematurely and decrease contaminants inside the building. Wherever feasible and applicable, public points of entry into buildings are to be equipped with walk-off mats. All walk-off mats at all public building entries are to measure a combined minimum of 10 linear feet in the direction of ingress.

4. Chemical Safety Procedures

The following protocols have been established to mitigate spills, leaks and mismanagement. All practices below are communicated to custodians working on the property in a formal training setting on a biannual basis.

- a) Labels and Safety Data Sheets (SDS)
 - i. Follow all chemical labels and SDS warnings and use products only as directed.
 - ii. Employees should never use an unlabeled container or any chemical product if not certain what it is.
 - iii. Report all missing or unreadable labels to a manager

- b) Personal Protective Equipment (PPE) and Engineering Controls
 - i. Wear protective gloves and/or safety glasses as directed on the product label or SDS.
 - ii. Inform your Manager if PPE is needed.
 - iii. Always spray chemicals away from the body, especially eyes and mouth. Whenever possible, spray chemical into microfiber cloth.
 - iv. Do not eat or drink near any cleaning chemicals and always wash hands after using chemicals.
 - v. Never smell, inhale, or taste the contents of a chemical container to determine its contents.

- c) Cleaning with Chemicals
 - i. Use only products provided by Custodial Services.
 - ii. Employees should only use products they have been trained to use.

- iii. Report all chemical spills to a manager immediately and refer to instructions on SDS for proper spill cleanup and disposal.
- iv. Employees should inform a manager if unable to get something clean with the chemicals provided.
- v. If product comes into contact with any body part, flush immediately with water. Remove any contaminated clothing. Follow first-aid instruction on the label or SDS.
- vi. All chemical containers are to be securely covered and stored away from flames or intense heat.
- vii. Properly remove all cleaning chemical residue so customers and tenants will not be overexposed to chemicals.
- viii. Wash hands after using chemicals.
- ix. Do not bring products from home.
- x. Never puncture or collapse an aerosol can. Use only in accordance with label instructions.

d) Mixing Chemicals

- i. Never mix two different chemical products together. This may cause a dangerous and poisonous gas.
- ii. Only fill each secondary container bottle with the exact same product each time you refill.
- iii. Dilute with water only where required.
- iv. Make sure water is turned off and that no chemicals remain in mop buckets, unlocked dispensers, or machine tanks overnight.
- v. Make sure all caps are secure when returning chemicals to rack or closet.

e) Chemical Storage

- i. Do not store chemicals above eye level.
- ii. Do not store food or drinks around chemicals. No food or water may be kept on a janitor cart.
- iii. All chemicals must be stored in a manner that limits opportunities for accidental spills, leaks and other mishaps.

f) Chemical Safety and Emergency Procedures

- i. Report all chemical product spills to a manager immediately and refer to instructions on the SDS for proper spill cleanup and disposal.
- ii. If any product comes into contact with any body part, flush immediately with lots of water. Follow first-aid instruction on the label or SDS. Call 911 if needed. Employees are to report contact to manager.
- iii. All chemical containers are to be securely covered and stored away from flames, heat and the sun.
- iv. Properly remove all cleaning chemical residue so customers and tenants will not be unknowingly exposed to chemicals.

g) Chemical Concentrates and Dilution Systems

- i. It is the intent of building management to have chemical concentrates used whenever possible in order to lower transportation costs between manufacturer and end-user, reduce use of packaging materials, reduce real chemical use to obtain

same performance, and to lower exposure of maintenance personnel to hazardous chemicals.

- ii. A portion-controlled, closed dilution system is to be utilized in order to further reduce environmental impacts.
- iii. Pre-labeled containers are to be utilized.
- iv. Dilution systems and chemical concentrates shall be wholly utilized in alignment with green cleaning policy procedures.

h) Performance Metric

- i. Protocols governing safe handling and storage of cleaning chemicals shall be adopted. Quality control checks will be used to ensure adoption.

5. Cleaning Strategies for Vulnerable Building Occupants

The needs of vulnerable building occupants, such as occupants with asthma, other respiratory conditions, or sensitive or damaged skin, at Northwestern University will be addressed to ensure that adequate precautionary measures are taken in relation to the Green Cleaning Program. Product selection and use should vary on a case-by-case basis, as needed.

6. Hand Hygiene

All restroom facilities, including those in guest rooms, public areas, and back-of-house spaces shall include appropriate hand-push soap dispensers (see Appendix A for approved Cleaning Products list). Staff will be educated on the importance of hand hygiene through informative seminars. Protocols promoting hand hygiene shall be adopted. Quality control checks will be used to ensure adoption. All staff will be required to clean their hands using this soap upon the completion of their workday to protect their health as well as others.

7. Staffing Planning

To ensure a clean environment that promotes the health and wellbeing of building occupants and users, Northwestern requires the following:

1. Custodians are provided with daily scope of work checklists to ensure all tasks are completed.
 - iii. All custodians are given a procedure list to follow and complete.
2. Daily and weekly inspections are performed by the Custodial Supervisor to ensure expectations and requirements for cleanliness are being met on an ongoing basis.
3. Custodial staff meets daily with the Custodial Supervisor to discuss any issues. When the supervisor is away a communication log is available to help pass on important information to communicate to one another.

8. Staff Training

1. All custodians are properly trained in the use, maintenance and disposal of cleaning products, dispensing equipment and packaging. All custodians are trained on new equipment and chemicals prior to initial use. Custodians also receive training about prevention of repetitive motion/stress injuries and the proper way to move and lift objects.

2. All custodians receive annual chemical safety training.
3. All custodians are educated on the use of products upon their hire and once per year thereafter, as well as annual HAZCOM training.
4. Training records of all staff are to be maintained by the Custodial Manager and Safety Coordinator. Records can be made available to building management for review upon request.

Refer to **Appendix C** for Green Cleaning Training Program.

D. Policy Review

1. Quality Control

Assessment of the ongoing performance of the Green Cleaning program at Northwestern University will be conducted by a three-part process:

1. On a daily basis, the Custodial Supervisor and management assess custodial performance in the buildings, discuss any issues or challenges, and address any new developments relating to custodial practices.
2. Custodial Services will report product purchases with sustainNU and Facilities Management Finance & Administration annually to ensure compliance with target purchasing goals.
3. Purchasing-related performance will be tracked to ensure compliance with LEED credit requirements as per individual product categories.

2. Occupant Feedback

Individual occupants may give feedback to the janitorial contractor and Facilities Management through the Facilities Management online support center. For more constant communication with customers, Facilities Management has established the Ally program, whereby FM employees are designated as “allies” to support individual departments across the university with their facilities concerns and reports. Feedback concerning entire departments or areas should go through the FM Ally program.

Forms/Instructions

Appendix A – Green Cleaning Product List
Appendix B – Green Cleaning Supplies Report
Appendix C - Green Cleaning Training Program and Forms

Appendices

Sustainable Purchasing Policy and Guidelines
Waste Management Policy and Guidelines

Related Information

RESPONSIBILITY:

Vice-President, Facilities Management
Sustainability Director
Manager of Sustainability and Resource Management
Director of Operations and Maintenance
The Supervisor of Custodians
Residential Services
Northwestern Athletics Management

History/Revision Dates

Origination Date: January 1, 2017