# Green Cleaning Policy

**Purpose**

Iowa State University, through its custodial units, has established this policy to reduce the exposure of building occupants and custodial personnel to potentially hazardous chemical contaminants that adversely impact air quality or impede occupants’ well-being. This overarching policy is further augmented by individual custodial unit policies offering prescriptive detail related to each unit’s unique custodial needs.

Applicability

This policy applies to all cleaning procedures and cleaning services executed by custodial units at Iowa State University and cleaning material purchases and cleaning equipment purchases through Procurement Services, Central Stores and established commodity contracts.

**Goals** **and** **Strategies**

The goal of this policy is to minimize the impact of cleaning on the local environment and to emphasize and practice environmentally safe, low-impact cleaning. University custodial units continually aim to improve their performance by:

* Educating, training, and motivating custodial staff to work in an environmentally responsible manner.
* Ensuring that all custodial staff are aware of their responsibilities in implementing the Green Cleaning policy.
* Conserving energy, water, and other resources while still providing a clean and sanitary environment.
* Complying with all relevant current legislation and industry standards.
* Using cleaning products that meet Green Seal standard GS-37 or products with low-volatile organic compounds (VOC) whenever applicable.
* Using products that meet EPA standards with high post-consumer recycled content.
* Using equipment with good filtration.
* Eliminating all phosphates and aerosol products.
* Using concentrated cleaning products when available.
* Using chemicals that are automatically and accurately diluted using cold water.
* Using products that are minimally packaged using recycled materials.

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

* + Cleaning strategies will be used to reduce the energy and water used by powered equipment and typical cleaning strategies.
  + Cold water use is prioritized to reduce energy used to heat hot water.
  + The filters in vacuums and other applicable equipment will be changed frequently to enable air flow and reduce the energy consumption of the equipment.
  + When cleaning chemicals are necessary, chemicals will be automatically diluted or the operating procedures for chemical dilution will be followed to ensure that the minimum amount of cleaning chemicals necessary is used.

### Strategies for reducing the toxicity of the chemicals used for laundry, ware washing, and other cleaning activities

* Cleaning staff and building occupants will be supplied with safe cleaning chemicals that meet the sustainability criteria described in the green purchasing guidelines listed below.
* Dish soaps and laundry detergent meeting EPA Safer Choice Standard will be supplied for ware washing and laundry.
* For surface cleaning, ionized water cleaning devices (using only water) will be used as much as possible. Such devices shall have third-party-verified performance data equivalent to the other standards mentioned under “Purchasing Criteria” (if the device is marketed for antimicrobial cleaning, performance data must demonstrate antimicrobial performance comparable to EPA Office of Pollution Prevention and Toxics and Design for the Environment requirements, as appropriate for use patterns and marketing claims).

**Strategies for effective cleaning of hard floors and carpets**

* Hard floors, including tile, concrete, and wood surfaces, will be cleaned once a week with only sustainable cleaning products. No stripping or coatings will be applied to hard floor surfaces.
* Carpets will be vacuumed with vacuum cleaners that meet the sustainability criteria listed later in this policy.
* One per month, the carpets will be inspected for stains and other damages. If feasible, the necessary areas will be spot cleaned with sustainable carpet cleaning materials. If damaged, the carpet tiles will be replaced.
* When carpet extraction equipment must be used, methods to reduce chemical usage will be implemented.

**Guidelines for selection and appropriate use of disinfectants and sanitizers.**

* Only hand soaps and hand sanitizers that meet the 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 throughout the building for the use of occupants
* Only disinfectants meeting the purchasing sustainability criteria listed below will be considered to meet the requirements of this policy. Disinfectants will be kept locked in the janitorial closets and may only be used by the cleaning staff.
* Cleaning staff will be required to follow all dilution strategies for disinfectants.

**Purchasing** **Criteria**

Cleaning product contracts are established commodity contracts or contracts issued through Iowa State University Procurement Services based on criteria provided by University custodial units. Contracts, through Procurement Services, are issued every five years. During the bidding cycle, requests for proposals are evaluated using the criteria listed below. The goal is that >90% of all the products used for University daily custodial routine meet the following criteria:

* The cleaning products meet one or more of the following standards for the appropriate category:
  + Green Seal GS-37, for general-purpose, bathroom, glass, and carpet cleaner use for industrial and institutional purposes
  + UL EcoLogo 2792, for cleaning and degreasing compounds
  + UL EcoLogo 2759, for hard-surface cleaners
  + UL EcoLogo 2795, for carpet and upholstery care
* Disinfectants, metal polish, floor finishes, strippers or other products not addressed by GS-37 or UL EcoLogo 2792, or 2759, or 2795 shall meet at least one of the following standards for the appropriate category:
  + Green Seal GS-40, for industrial and institutional floor-care products
  + UL EcoLogo 2798, for digestion additives for cleaning and odor control
  + UL EcoLogo 2791, for drain or grease-trap additives
  + UL EcoLogo 2796, for odor-control additives
  + UL EcoLogo 2777, for hard-floor care
  + Green Seal GS-52/53, for specialty cleaning products;
  + 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 Trash Can Liners
    - Trash Can Liners with a thickness of less than 0.7 mil will be excluded from the performance calculation according to LEED Interpretation ID#2460 (4/6/2009)
  + Green Seal GS-09, for paper towels and napkins
  + 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.
* 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
  + UL EcoLogo 2784, for hand cleaners and hand soaps.
  + UL EcoLogo 2783 (formerly CCD170), for hand sanitizers.

Equipment purchases are handled by Iowa State University Procurement Services based on specifications set by University custodial units. Equipment is purchased on an annual basis, with specialized equipment as needed.

Bidding criteria include the following and all selected equipment shall meet these criteria:

* Vacuum cleaners must be certified by the Carpet and Rug Institute Seal of Approval/Green Label Vacuum Program, shall capture 96% of particulates 0.3 microns in size, and shall operate with a sound level less than 70dBA. The vacuum should not affect the texture appearance of the carpet more than a one-step change based on one year of normal vacuum use.
* 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, shall remove >75% of soil after water only cleaning operation and shall leave <272 g/sq.m (8oz./sq.yd.) residual moisture in carpet immediately after cleaning operation. No more change in deterioration of the carpet pile surface shall be visible after eleven (11) cleaning cycles are applied to commercial cut pile carpet.
* Powered floor equipment - e.g., electric and battery-powered floor buffers and burnishers equipped with vacuums, guards and/or other devices for capturing fine particulates and operates with sound level less than 70 dBA.
* Automated scrubbing machines are equipped with variable-speed feed pumps and on-board chemical metering to optimize the use of cleaning fluids. Battery-powered equipment is equipped with advanced glass mat (AGM), wet cell, and rechargeable lithium batteries.
* Powered equipment is ergonomically designed 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;
* Equipment is designed with safeguards, such as rollers or rubber bumpers, to reduce potential damage to building surfaces.

# Green Cleaning Products and Equipment

Below is a list of environmentally preferable cleaning products and equipment that is representative of all University custodial units.

Products

1. Cleaning Chemicals:

The Brulin chemical dispenser system features a single compact dispenser designed to accurately mix and dispense a wide range of concentrated cleaning chemicals. Only cold water will be used.

* + TerraGreen Neutral Cleaner (Green Seal Certified)
  + TerraGreen Degreaser (Green Seal Certified)
  + TerraGreen Blue Glass Cleaner (Green Seal Certified)
  + TerraGreen HyPerMaxx Cleaner (Green Seal Certified)

1. Floor Finish:

* Spartan Chemicals Green Solutions - Floor Finish Remover (Green Seal Certified)
* Spartan Chemicals Green Solutions - Floor Seal & Finish (Green Seal Certified)

1. Paper Products:

Paper Towel:

Manufacturer: Kimberly-Clark Professional; Brand: SCOTT® Essential High Capacity Hard Roll Towel is the following attributes: meets EPA for post-consumer waste (40%), Chlorine free, 60% recycled fiber content, Forest Stewardship Council (FSC) and ECOLOGO certified.

Toilet Tissue:

Manufacturer: Kimberly Clark Professional; Brand: SCOTT® Coreless JRT Jr 2-ply Bathroom Tissue brings you high capacity, with each roll having 15% more tissue than standard Jumbo Roll Tissue Jr. rolls. Elemental chlorine-free (ECF) bleaching, Meets EPA guidelines for post-consumer waste – minimum of 20%, Waste reduction with 100% elimination of core waste, 15% more paper per roll.

1. Other products:

* High-density trash liners contain at least 30% recycled content
* GOJO® Green Certified Foam Hand, Hair & Body Wash; ECOLOGO certified and USDA certified biobased product; SMARTFLEXTM bottle design uses 30% less material than HDPE
* Envirox Mineral Shock #141 – Lime and Scum remover (Green Seal Certified)

1. Equipment:

* Microfiber (oil-free) dust and wet mops.
* EchoMop 1400 – Wet Mops with 30% post-consumer and 67% post industrial waste. Made from Pop Bottles.
* EchoAdvantage Dust Mops – Dust Mops with 30% post-consumer and 67% post industrial waste. Made from Pop Bottles.
* Matting by Design – Sbemco entrance mats - 8 bottles per square ft. One 7 X 10 mat keeps 560 water bottles out of the landfill.
* Super QuarterVac® HEPA Pro Team backpack vacuum with four-level filtration.
* Karcher BVL 5/1 BP backpack vacuum made with expanded polypropylene (EPP) and HEPA-14 filter.
* Advance Aqua Spot Carpet Spot Extractor.

### Recycling Program

The following products are to be recycled using product specific appropriate methods.

* Floor pads are recycled until they are unusable.
* Micro-fiber cleaning cloths
* Micro-fiber wet mops
* Micro-fiber dust mops
* Other recycled commodities (papers, cardboards, fluorescent lights)

**Training** **Program:**

Custodial staff, across all University custodial units, is trained to clean in an environmentally friendly and safe manner using green cleaning products. New custodians are trained on the processes for green cleaning, and the importance of following these procedures is explained. All employees receive ongoing training on the importance of green cleaning.

Staff training plan

* All cleaning staff, including backup personnel, are required to receive at least 8 hours of training per year.
* During monthly hour-long meetings, custodians receive additional training. Topics vary each month and may cover standard operating procedures for cleaning different surfaces, proper toxic chemical usage and spill management, hazards of toxic chemicals, cleaning to protect vulnerable occupants, cleaning equipment maintenance, recycling procedures, and conservation of energy and water usage during cleaning. Similar information is included in a bi-weekly custodial newsletter. Online training is scheduled throughout the year.
* The University custodial unit supervisors coordinate and ensure completion of all of the in-person trainings. Online trainings are reviewed and scheduled yearly.

**Staffing** **and** **contingency** **plans**

* Staff is allocated based on square footage according to the APPA level of cleaning desired.
* A float crew is maintained to ensure consistent services to mitigate staffing shortages.

### Quality Assurance/Quality Control Processes

University custodial unit directors evaluate the green cleaning policy on an annual basis to evaluate progress towards the implementation goals and ensure representative policy updates are completed as applicable.

In addition, each unit director will evaluate their specific unit policy on an annual basis. If any implementation goals are not being met, University custodial unit directors will investigate the situation and work with the individuals purchasing the materials and equipment or using the equipment. The unit directors will evaluate whether updates are necessary to the unit green cleaning policies in order to achieve the implementation goals. Any revisions that are made to the policy will be incorporated into the next training cycle for the cleaning staff.

In addition, If any cleaning product or equipment purchases are not being recorded properly, unit directors will inform the appropriate individuals to ensure that activities are recorded moving forward. University custodial unit directors 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 unit directors revise unit green cleaning policies to include additional cleaning strategies or modify existing cleaning strategies.

**Customer** **Feedback**

Iowa State University employees, staff, and building occupants can request custodial services either by calling a service center or by submitting a service request through an online system.

In November each year, randomly selected customers are invited to comment on the quality of the services. Survey results are tabulated and are shared with the manager responsible for the area.

In addition to the above, customers may call the Customer Service Center 24 hours a day to request, track or provide feedback on services. All issues are forwarded to the Custodial Supervisor responsible for the building. The goal is for 100% of these issues to be resolved as quickly as possible within a two-week time period.

**Safe** **Handling** **and** **Storage**

Safe storage and handlings of cleaning chemicals, including spill management

Cleaning chemicals will be stored in the janitor closets to prevent access for other occupants.

Cleaning staff will receive training on the various hazards of different toxic chemicals and how to address spills. Spills will be cleaned and handled according to the manufacturer safety data sheets provided by the manufacturer. All spills will be handled carefully. As soon a spill of a non-sustainable product occurs, the responsible party must be notified. If the spill occurs in an area to which typical building occupants have access, the area will be roped off and building occupants will be informed to stay clear of the area.

Material safety data sheets for all of the cleaning chemicals used in the building will be retained and hazard information will be highlighted. This information will be available in an online repository.

**Hand** **Hygiene**

Preferred equipment will be hands-free soap dispensers, faucets, hand dryers, and towel dispensers. Hand sanitizers meeting UL EcoLogo 2783 standard for Instant Hand Antiseptics (formerly Environmental Choice CCD 170) will be placed throughout the building.

**Vulnerable** **Populations**

To protect vulnerable building occupants, custodians use only low/no VOC cleaning products. Cleaning activities that require stronger chemicals, such as floor restoration, will be completed when the building is unoccupied, whenever possible. A high level of building cleanliness will be maintained to minimize the presence of irritants.

### TRACKING

Tracking plan for staffing and overall performance

* Regular APPA audits will be conducted by custodial supervisors to evaluate cleanliness. Discussions are held with custodial staff to ensure that the cleaning and hard floor and carpet maintenance system is being consistently used.
* The audits will be conducted at least once every sixth-months and will be led by the responsible party for this policy. The responsible party is responsible for recording the results of the audits in the management records, following up with any cleaning staff to provide additional training and/or guidance and recording these actions.
* All cleaning staff are required to clock in each day when they arrive at work. The responsible party will retain these records to ensure that the building is sufficiently staffed with trained professionals.
* The responsible party will log all training that is provided to the cleaning staff and will ensure that the training plans described above are met.
* When new staff come on board, the responsible party will record the initial training and orientation provided to the staff.

Tracking plan for water, energy, and toxic chemical usage

* Use of toxic chemicals is limited and staff are trained in proper use. Application of these chemicals is recorded and tracked.
* All vacuum filters will be replaced as-needed. Maintenance performed on all cleaning equipment is recorded.

Tracking plan for cleaning product and cleaning equipment purchases

* Allowable cleaning products are ordered through Central Stores and are tracked through FAMIS. Equipment purchases are tracked by equipment manager and recorded.
* Orders are completed by supervisors from an approved list of products only.