

# Colgate University

## **Green Cleaning Policy & Program Plan**

Policy implemented: July 1, 2017

### **Section 1: Scope**

This Policy and Plan addresses environmental best practices for cleaning interior building spaces at Colgate University. Specifically, it addresses the use of 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.

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### **Section 2: Goals**

The goal of this Green Cleaning Policy and Plan is to reduce the exposure of building occupants and maintenance personnel to potentially hazardous chemical, biological and particulate contaminants, which adversely impact air quality, health, building finishes, building systems and the environment.

Colgate University implements green cleaning practices to protect all employees and building occupants but especially for vulnerable populations, such as pregnant women, children, asthmatics, elderly occupants, individuals with allergies and highly sensitive individuals. Custodial Services shall routinely use only low/no VOC cleaning products. Any cleaning and floor restoration activities that necessitate the use of a higher VOC-containing product will be conducted outside of normal business hours when the majority of occupants have left the building. Per usual practice, the staff shall limit the number of cleaning chemicals used and stored within the building. A high level of cleanliness will be maintained thus minimizing the presence of irritants while maintaining a healthy indoor environment.

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### **Section 3: Responsible Parties**

- The Director of Operations and Maintenance (Facilities Department), with support from the Director of Sustainability, is ultimately responsible for ensuring proper implementation and management of Colgate's Green Cleaning Policy and Plan. The Director of Operations and Maintenance is knowledgeable of and responsible for overseeing the proper adherence to the department's green cleaning practices. The Director will coordinate and direct supervisors and employees to meet the needs of the building occupants and match them with the resources of the department.
- The Custodial Supervisor assigned to each building is responsible for the implementation of the green cleaning program and will work to ensure that all building custodians are fully aware of the program and effectively follow it. The assigned Custodial Supervisor shall be knowledgeable of and responsible for overseeing the building's assigned staff and their adherence to the green cleaning program. Supervisors will train and instruct custodians on

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green cleaning practices as needed in the following areas: chemical usage, proper equipment use and maintenance, best-practices. Supervisors will conduct their routine building inspections to ensure proper cleanliness goals are met and ensure that staff are following the building's written work plan. Supervisors also monitor and track supply requests and usage.

- Custodial staff are knowledgeable of and responsible for the daily hands-on implementation of the building's green cleaning program. They will implement and follow the cleaning frequencies set forth by the Facilities Department's SOP (standard operating practices) utilizing the provided equipment, materials, chemicals and best practices.

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## **Section 4: Quality Assurance Control Process**

The parties responsible shall periodically evaluate the success of Colgate's Green Cleaning Policy and Plan. This evaluation may include assisting the Director of Sustainability in producing and providing a report on an annual basis to senior management. Whenever possible, the annual report shall include an evaluation of the performance, safety, cost and environmental/public health benefits achieved as a result of its implementation.

Prior to implementation, the responsible parties shall review all proposed cleaning practices to determine that they meet the criteria of the Green Cleaning Policy and Plan.

The responsible Custodial Supervisor shall ensure that the Green Cleaning Policy and Plan is in place and functioning as intended. In addition to ongoing quality control measures, the Director of Operations and Maintenance and Custodial Supervisors will review all practices and products (typically annually) to identify opportunities for improvement and expansion of environmentally-friendly practices.

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## **Section 5: Cleaning Products and Practices**

### **Performance Metrics and Measurement**

The practices listed below shall be implemented, to the extent practicable, with a target goal of 60% [30% minimum] of products complying with the criteria listed below, based on cost. The Custodial Supervisor shall track purchase rates of both compliant and noncompliant products for the building.

### **Use of Sustainable Cleaning Products**

Cleaning products and materials, including hard-floor and carpet-care products, when possible, meet the requirements of LEED IEQc3.3: Green Cleaning, Purchase of Sustainable Cleaning Products and Materials.

Product types subject to these requirements include, but are not limited to, bio-enzymatic cleaners,

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hard-floor cleaners, carpet cleaners, general-purpose cleaners, specialty cleaners, odor control, disinfectants, disposable janitorial paper products and trash bags, and hand soaps.

## **IEQc3.3: Green Cleaning, Purchase of Sustainable Cleaning Products and Materials 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
  - Environmental Choice CCD-110, for cleaning and degreasing compounds
  - Environmental Choice CCD-146, for hard-surface cleaners
  - Environmental Choice CCD-148, for carpet and upholstery care.
  
- Disinfectants, metal polish, floor finishes, strippers or other products not addressed by GS-37 or Environmental Choice CCD-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 CCD-112, for digestion additives for cleaning and odor control
  - Environmental Choice CCD-113, for drain or grease-trap additives
  - Environmental Choice CCD-115, for odor-control additives
  - 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 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
  - Environmental Choice CCD-082, for toilet tissue
  - Environmental Choice CCD-086, for 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
  - Environmental Choice CCD-104, for hand cleaners and hand soaps.

\* Note: Trash bags, paper products (paper towels, toilet paper) and hand soap are procured through the Purchasing department bidding process.

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Colgate University's Custodial Services currently uses the following Green Seal Certified and Green Guard Indoor Air Compliant cleaning chemicals and floor care products:

1. Stride Neutral Floor Cleaner
2. Glance NA Glass & Multi-Purpose Cleaner Non-Ammoniated
3. Clean By Peroxy
4. Pro Strip SC through RTD Floor Stripper

Custodial Services also uses Oxivir five-16 which is an Accelerated Hydrogen Peroxide with the safest Health Rating (0) and fastest disinfectant (5 minutes) through an Ready-to-Dispense system (RTD). The RTD dispensing system allows proper control for the dilution of chemicals and meets all sustainable guidelines.

Custodial Services also use the following sustainable products:

1. Ecolab Nexa Gentle Lotion Foam Hand Soap (Green Seal Approved)
2. K.C. Towel and Toilet Tissue (meets all EPA Standards for Post Consumer Waste)

## **Use of Environmentally-Friendly Cleaning Practices**

Custodial Services will implement green cleaning practices in each Colgate building. These practices will be centered around Diversey's Healthy High Performance Cleaning Program (HHPC) which employs the use of green cleaning methods. The use of green cleaning methods can lower costs, reduce wastes, conserve resources, and reduce the risk for occupants to be exposed to pollutants and pathogens. The HHPC Program has a center around the use of microfiber products in lieu of paper or cotton products. These practices will be adopted in Colgate buildings and staff members who work in the building will be trained on these best-practices

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## **Section 6: Cleaning Equipment**

### **Performance Metrics and Measurements**

All newly acquired cleaning equipment shall comply with the criteria listed below. The Custodial Supervisors shall track the percentage of all equipment that meets the criteria, based on cost or number of pieces of equipment, with a target of 20% compliance at the start of occupancy (July 1, 2018).

### **Use of Sustainable Cleaning Equipment**

#### Purchase Criteria

All new equipment acquisitions shall comply with the requirements of IEQc3.4: Green Cleaning, Sustainable Cleaning Equipment:

- Vacuum cleaners meet the requirements of the Carpet and Rug Institute "Green Label" Testing Program— Vacuum Cleaner Criteria and are capable of capturing 96% of

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particulates 0.3 microns in size and shall operate with a sound level less than 70dBA.

- Carpet extraction equipment for restorative, deep cleaning is certified by the Carpet and Rug Institute's "Seal of Approval" Testing Program for deep-cleaning extractors.
- Powered floor equipment—e.g., electric and battery-powered floor buffers and burnishers—is equipped with vacuums, guards and/or other devices for capturing fine particulates, and operates with a sound level less than 70dBA.
- Propane-powered floor equipment has high-efficiency, low-emission engines with catalytic converters and mufflers that meet California Air Resources Board (CARB) or Environmental Protection Agency (EPA) standards for the specific engine size, and operate with a sound level of less than 90dBA.
- Automated scrubbing machines are equipped with variable-speed feed pumps and onboard chemical metering to optimize the use of cleaning fluids. Alternatively, the scrubbing machines use only tap water with no added cleaning products.
- Battery-powered equipment will be equipped with environmentally preferable gel batteries if available and practical.
- Powered equipment is ergonomically designed to minimize vibration, noise and user fatigue.
- Equipment is designed with safeguards, such as rollers or rubber bumpers, to reduce potential damage to building surfaces.

## Record-keeping

Equipment used within the building will be added to the Equipment Inventory List and any maintenance activities will be documented. Vendor cut sheets for all equipment used shall be stored onsite in the Custodial Services office. When cleaning equipment replacement is necessary, acquisition dates and supporting documentation shall be retained to demonstrate that all newly acquired equipment complies with the specifications.

## **Approved Equipment List**

The equipment listed below is approved in the event of new equipment acquisition. Equipment beyond that listed here must be reviewed to ensure it meets the criteria of this plan prior to acquisition:

- Tornado CV38/1 Vacuum Cleaner (CRI Silver Level Certification)
- Advance Aquaclean 16ST (CRI Bronze Level Certification)
- Taski Swingo 350B Floor Scrubber (<70dBa sound level; better hygiene than manual cleaning)
- 3M Stone Floor Program (Environmentally preferable system)
- Diversey RTD cleaning chemical management system (lessens waste, more efficient

dilution control)

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## **Section 7: Hard Floor and Carpet Maintenance**

### **Performance Metrics and Measurement**

Floor-care maintenance shall consistently be performed according to written protocols.

### **Practices to Optimize Hard-Floor and Carpet Maintenance**

- The floor and carpet maintenance program, where appropriate, is designed to use few, or no, harmful chemicals; remove and eliminate irritating dust, dirt and other contaminants; and protect and preserve floors.
  - Some hard flooring surface types installed on campus will not need any waxing or stripping. This will minimize chemical usage, and minimize occupants exposure to harmful chemicals.
  - The 3M Stone Floor Program will be used on marble flooring within appropriate buildings. This is an environmentally-preferred maintenance program.
  - A floor maintenance plan shall be included in the written building work plan. The plan will detail the number of coats of floor finish being applied as the base and other applications (top coat), along with all relevant maintenance/restoration practices.
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## **Section 8: Entryway Systems**

### **Performance Metrics and Measurements**

Protocols promoting effective use of entryway systems shall be adopted. Quality control checks will be conducted during the building inspection process.

### **Use and Maintenance of Entryway Systems**

All entryways and entrances will be equipped with walk-off mats:

- Walk-off mats at all primary entrances shall be vacuumed daily and shampooed as needed. These systems shall be a minimum of 10 feet long in the direction of travel.
- The flooring beneath the mats shall be vacuumed and mopped on a monthly basis.
- Secondary entrances shall also have walk-off mats of 10 – 12 feet in length to capture initial

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loose particles entering the building. These mats must be vacuumed daily, and the floor beneath shall be vacuumed and mopped on a monthly basis.

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## **Section 9: Hand Hygiene**

### **Performance Metrics and Measurements**

Protocols promoting hand hygiene shall be adopted. Quality control checks will be conducted during the building inspection process.

### **Practices to Optimize Hand Hygiene**

All restroom facilities, including those in public areas and maintenance spaces shall include appropriate hand soaps. (See Section 5).

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## **Section 10: Handling and Storage of Cleaning Equipment**

### **Performance Metrics and Measurements**

Custodial staff will be trained on the safe handling and storage of cleaning chemicals. Quality control checks will be conducted during the building inspection process.

### **Practices to Optimize Handling and Storage of Cleaning Chemicals**

The following protocols have been established to mitigate spills, leaks and mismanagement:

#### **Storage**

- Staff will only store approved cleaning chemicals on-site in a limited amount.
- All cleaning chemicals will be stored using general safe practices including, but not limited to: not stored above eye-level, incompatible materials will not be stored together, proper labeling of all containers, cleaning chemicals will be stored using the manufacturer's instructions.
- If cleaning vendors are hired they will be responsible for removing all chemicals brought into the building.

**Chemical Dilution systems:** (See Section 11)

**Safety Data Sheets (SDS) Records**

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- Colgate University is required to provide accurate SDSs for all chemicals purchased and used by their employees.
- SDSs are tracked through the Environmental Health & Safety Department (EHS) and provided to staff via an online database: ChemWatch.
- The link to the database is available on the EHS page of the Colgate University website.
- The cleaning chemical supplier maintains a toll-free hotline that can be called in the event of spills or accidents to access safety data and protocols.

## **Emergency Procedures**

All written campus safety emergency procedures will be followed. Per the University's website, Campus Safety should be contacted in the event of an emergency.

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## **Section 11: Use of Chemical Concentrates and Dilution Systems**

Highly concentrated cleaning products reduce environmental impact from packaging and transportation, and typically reduce actual use cost compared to less concentrated alternatives. However, to gain the environmental benefits and to protect workers exposed to these more highly concentrated products during mixing, extra care should be taken.

Colgate University's Custodial Services currently employs RTD system in their custodial closets, ensuring that concentrates are mixed correctly, with no waste. There is no spillage and the chemicals are effectively deployed to the units with a minimal of contact. Custodial staff are trained on the proper procedures regarding the utilization of this equipment, minimizing the challenges that manual dilution presents.

If using manual dilution, e.g. accu-dose or pump, Custodial staff understand that by adding extra chemical concentrate beyond recommended dilutions that the product will not necessarily perform better. In fact, surfaces can become slippery and/or take on a cloudy or streaked appearance due to chemical residue. They never mix cleaning products together. Some cleaning chemicals can react when mixed to give off dangerous by-products. The instructions listed on the product label should be followed prior to disposal of the empty container.

Products should always be diluted accurately according to manufacturer's directions. This is achieved through a variety of methods including accu-dose systems, simple dispensing pumps and automated dilution equipment. Dilution control equipment is highly recommended because it minimizes the potential for human error and reduces the chance of chemical exposure to concentrates. If you think there is a problem with the dilution control device, let your supervisor know so that it can be checked for proper operation and accuracy.

### **General Use Instructions:**

- Colgate University Facilities uses the Sealed Air RTD dilution system on campus.



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- All staff members will be instructed on proper usage of the RTD system prior to working in the building.
- Staff members will be given and expected to use the appropriate personal protective equipment when using any chemicals.
- Follow manufacturer's dilution directions. Do not under -or- over-dilute concentrated cleaning products.
- Make sure that any bottles (including secondary containers) have appropriate labels.
- Never mix different cleaning products together.

## **Instructions for Using the RTD System:**

1. Read operator's guide and remove product from box.
  2. Connect to water source
  3. Adjust control knob settings to bucket or bottle
  4. Fill
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## **Section 12: Vulnerable Building Occupants**

To protect vulnerable building occupants, such as pregnant women, children, asthmatics, elderly occupants, individuals with allergies and highly sensitive individuals, cleaning staff from Colgate's Custodial Services shall routinely use only low/no VOC-containing cleaning products. Any cleaning and floor restoration activities that necessitate the use of a higher VOC-containing product will be conducted outside of normal business hours when the majority of occupants have left the building. Per usual practice, the staff shall limit the number of cleaning chemicals used and stored within the building. A high level of cleanliness will be maintained thus minimizing the presence of irritants while maintaining a healthy indoor environment.

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## **Section 13: Staffing and Training**

### **Performance Metrics and Measurement**

All custodial staff shall receive regular training. Vendors shall supply evidence of compliance with training requirements prior to contract award or renewal.

### **Practices to Optimize Staffing and Training**

All custodial staff and managers are required to attend annual safety training, addressing, at

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minimum, hazards associated with the use, disposal and recycling of cleaning chemicals, dispensing equipment and packaging. This safety training will be managed and presented by EHS.

## Training Topics

Hours	Required Safety Training (Through EHS)
0.50	Hazardous Waste Management
0.50	Hazard Communications Training (SDS overview covered here)
1.00	Bloodborne Pathogens - Emergency Spill Clean-up Procedures
0.25	Safe Lifting and Preventing Back Injuries
1.00	Asbestos Awareness Training
<b>3.25</b>	<b>Total</b>

Hours	Facilities Training (Given by Custodial Management)
1.50	New Staff Onboarding
1.00	Overview of Standard Operating Procedures
1.50	Use of RTD System & Other Cleaning Products
1.00	HHPC Procedures
<b>5.00</b>	<b>Total</b>

## Annual Training Hours

All workers shall receive a minimum of 6 hours of training annually.

## Staffing Plan

Each building at Colgate has at least one custodial staff member assigned to work in the space for a minimum of 4 hours per day. Assigned staff members will either be working in the building starting at 5 am or in the evenings after the majority of the building occupants have left. The staff member will be assigned using the standard bidding process described within the union contract.

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## Section 15: Occupant Feedback

### Performance Metrics and Measurement

In the event that building occupants have any concerns over the cleanliness of the building and / or want to provide any feedback to Custodial Services, they will be able to contact the assigned Custodial Supervisor. Occupants are encouraged to alert the management to any issues or concerns that they have.

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## **Section 16: Time Period**

This policy shall take effect on July 1, 2017. The policy shall continue indefinitely or until amended and/or replaced by a subsequent Green Cleaning Program.