

PORTLAND COMMUNITY COLLEGE
Green Cleaning Program and Plan
Updated July 8, 2024

SECTION 1: SCOPE

The PCC Green Cleaning Program Program and Plan addresses environmental best practices for cleaning the interiors of all buildings and applicable property owned by Portland Community College.

Specifically, it addresses:

- Sustainable cleaning systems,
- Sustainable cleaning products and maintenance related to floor, carpet, and entryway system,
- Use of chemical concentrates and appropriate dilution systems,
- Cleaning equipment that reduces the impacts on indoor air quality,
- Training of maintenance personnel in the hazards, use, and disposal of cleaning chemicals, dispensing equipment and packaging,
- Promoting and improving hand hygiene; and
- Collecting and addressing occupant feedback.

Portland Community College (PCC) has formally adopted this Green Cleaning Program and Plan to implement green housekeeping practices in the maintenance of its building. This program and plan applies to all employees and contractors working for PCC. Labs with health and safety protocols due to program specific requirements (e.g. a working dental clinic) may have additional cleaning requirements; however, these are minimal at PCC.

SECTION 2: GOALS AND STRATEGIES TO BE IMPLEMENTED

Cleaning and maintenance products MAY contribute to indoor air quality problems, slip/fall hazards, and potential health hazards. The Green Cleaning Program and Plan has been established to ensure appropriate actions are taking place to reduce the environmental impact of maintaining the property while still providing a safe and healthy working environment for its occupants. The intent of this plan is to reduce exposure of occupants and maintenance personnel to potentially hazardous chemical, biological, particle contaminants and anything else that would adversely impact air quality, occupant health, building finishes, building systems, and the environment.

Goals of the Green Cleaning Program and Plan

- Reduce levels of chemical, biological and particulate contaminants
- Maintain a clean and attractive building
- Reduce or eliminate the use of toxic cleaning products
- Protect the health of building occupants and Custodial Staff

Sustainable Cleaning Strategies

- Efficient use of supplies
- Maintaining the hygienic and aesthetic goals of the property
- Protect the building's occupants, systems and finishes from contaminants that adversely affect them
- Custodian specifications that address the frequency of cleaning in all areas
- The highest degree of reutilization and recycling to be carried out by all Custodial staff working on the property
- Waste minimized by ordering materials without additional packaging and all packaging must be recycled

SECTION 3: ROLES AND RESPONSIBLE PARTIES

The Facilities Operations Manager and Campus Custodial Managers are responsible for developing and managing the implementation of the Green Cleaning Program and Plan.

Personnel involved with various elements of the green cleaning program shall carry out their tasks according to this program and plan, and report all relevant activities to the aforementioned parties. To ensure an effective and coordinated effort, the building staff responsible for overseeing the Green Cleaning Program and Plan shall review all proposed cleaning activities before implementation.

A. FACILITY OPERATIONS MANAGERS & CAMPUS CUSTODIAL MANAGERS

- Assess the areas to be maintained and 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 specifications to be used
- Ensure that in-house Custodial Staff are trained on the Green Cleaning Program and Plan
- Develop a schedule to meet with Custodial Staff
- Ensure that safety, health and environmental practices are compliant with applicable local regulatory requirements
- Ensure the proper disposal for all cleaning waste
- Conduct regular site inspections and evaluations
- Maintaining a log of approved cleaning equipment
- Notifying sustainability staff of changes to the approved chemical list and/or approved cleaning equipment
- Assign required annual trainings to Custodial staff

B. CUSTODIAL STAFF

- Shall attend all training programs or workshops on cleaning products or policies

- Report to the Facilities Operations Manager and Campus Custodial Managers per established schedule

C. SUSTAINABILITY STAFF

- Complete a green spend analysis at least every four years
- Update this plan as needed

SECTION 4: QUALITY ASSURANCE CONTROL PROCESS

The Facilities Operations Manager and Campus Custodial Managers shall periodically evaluate the success as laid out in Section 5D of this Green Cleaning Program and Plan. This evaluation may include 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.

The Facilities Operations Manager and Campus Custodial Managers shall annually communicate with all cleaning staff, and conduct regular site inspections and evaluations to ensure that the Green Cleaning Program and Plan is in place and functioning as intended. In addition to ongoing quality control measures, the responsible parties listed in Section 3 above will review all practices and products (typically annually) to identify opportunities for improvement and expansion of environmentally friendly practices.

Training of all Maintenance Personnel:

- All custodians are to be educated on the use of products upon their hire and once per year thereafter.
- All custodians are to complete annual HAZCOM training(s).
- All custodians are to complete annual Personal Protective Equipment training.
- All custodians are to be properly trained in the use, maintenance and disposal of all cleaning products, dispensing equipment, and packaging.
- Training records of all staff are to be maintained by the custodial manager and be made available to building management for review upon request.

SECTION 5: SUSTAINABLE CLEANING PRODUCTS AND USE OF CONCENTRATES

This section details standards for sustainable cleaning products and concentrates including products for general purpose, bathroom, glass and carpet cleaner for industrial and institutional purposes, paper products and concentrated cleaning product and dilution systems.

A. SUSTAINABLE CLEANING PRODUCTS

Cleaning products and materials, including hard-floor and carpet-care products, used at PCC Campuses and Centers shall, when possible, meet the requirements of LEED O&M: Existing Buildings v. 4.0 for Green Cleaning Products & Materials for Indoor Air Quality Credit.

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 custodial paper products and trash bags and hand soaps.

Cleaning products shall meet one or more of the following standards:

- Green Seal GS-37, for general-purpose, bathroom, glass and carpet cleaners used 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;
- Green Seal GS-40, for industrial and institutional floor care products;
- UL EcoLogo 2777, for hard-floor care; and/
- EPA Safer Choice Standard/ and or
- Cleaning devices that use only ionized water or electrolyzed water and have third-party-verified performance data equivalent to the other standards mentioned above (if the device is marketed for antimicrobial cleaning, performance data must demonstrate antimicrobial performance comparable to EPA Office of Pollution Prevention and Toxics and Design for the Environment requirements, as appropriate for use patterns and marketing claims).

Paper products should be composed of 100% recycled content (including post-consumer waste) and be of sufficient quality to maintain tenant comfort.

Disposable janitorial paper products and trash bags must meet the minimum requirements of one or more of the following programs:

- EPA comprehensive procurement guidelines, for janitorial paper;
- Green Seal GS-01, for tissue paper, paper towels and napkins;
- UL EcoLogo 175, for toilet tissue;
- UL EcoLogo 175, for hand towels;
- Janitorial paper products derived from rapidly renewable resources or made from tree-free fibers;
- FSC certification, for fiber procurement;
- EPA comprehensive procurement guidelines, for plastic trash can liners; and/or
- California integrated waste management requirements, for plastic trash can liners (California Code of Regulations Title 14, Chapter 4, Article 5, or SABRC 42290-42297 Recycled Content Plastic Trash Bag Program).
- Efforts should be made to acquire non-chlorine bleached pads. Tampons should have cardboard applicators. Pads and tampons without harmful chemicals such as phthalates, parabens, and bisphenols are preferred.
- Reduction of overall use of liners is a primary goal.

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 (e.g., 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, for hand sanitizers;
- EPA Safer Choice Standard

Disinfectants, metal polish, or other products not addressed by the above standards must meet one or more of the following standards (or a local equivalent for projects outside the U.S.)

- UL EcoLogo 2798, for digestion additives for cleaning and odor control;
- UL EcoLogo 2791, for drain or grease trap additives;
- UL EcoLogo 2796, for odor control additives;
- Green Seal GS-52/53, for specialty cleaning products;
- California Code of Regulations maximum allowable VOC levels for the specific product category;
- EPA Safer Choice Standard; and/or
- Cleaning devices that use only ionized water or electrolyzed water and have third-party-verified performance data equivalent to the other standards mentioned above (if the device is marketed for antimicrobial cleaning, performance data must demonstrate antimicrobial performance comparable to the EPA Office of Pollution Prevention and Toxics and Design for the Environment requirements, as appropriate for use patterns and marketing claims).

B. TOXICITY REDUCTION

It is the intent of the building management to reduce both the toxicity of and amount of products used in cleaning.

- All cleaning products must be Green Seal approved products, ECOLOGO-certified, EPA Safer Choice and/or meet the California Code of Regulations maximum allowable VOC levels.
- Bio-based products are to be used whenever possible.
- Products with a pH between 4.0 and 9.0 are to be used whenever possible.
- Products containing any of the following are not to be used whenever possible:
 - Any carcinogens, mutagens, or teratogens
 - Any ozone-depleting compounds, greenhouse gasses, or substances that contribute to photochemical smog and poor indoor air quality.
 - Petrochemical-derived fragrances
 - Dyes
 - Petroleum distillates

Endocrine modifiers, alkyl phenyl ethoxylates, dibutyl phthalate, or heavy metals such as arsenic, lead, cadmium, cobalt, chromium, mercury, nickel, and selenium.

More than 0.5% by weight of phosphorus

Chlorinated solvents

- All products used on-site must receive prior authorization of the Facilities Operations Manager and Custodial Managers and must comply with requirements in this document.
- Safety Data Sheets (SDS) for all products must be reviewed and approved by EH&S.
- SDS sheets are located in the on-line chemical inventory system: MSDS Online.

C. CONCENTRATED CLEANING PRODUCTS AND DILUTION SYSTEMS

- It is the intent of building management to have chemical concentrates used whenever possible
- A portion controlled, closed dilution system is to be utilized in order to further reduce environmental impacts.
- Pre-labeled containers are to be utilized.
- Custodial contractor periodically performs pH testing of products utilized.
- Custodial contractor periodically performs pH testing of carpet to ensure adequate levels are maintained after cleaning
- Benefits of concentrated products
 - The use of concentrated products lower:
 - Transportation costs between manufacturer and end-user
 - Use of packaging materials
 - Real chemical use to obtain same performance
 - Reduced exposure of maintenance personnel to hazardous chemicals

D. APPROVED CLEANING PRODUCT LIST

The cleaning product listed below is approved in the event of new product acquisition. When new products are approved, Sustainability shall be notified and this plan will be updated accordingly. Cleaning products beyond that listed here must be submitted for approval by the Facilities Operations Manager and Campus Custodial Managers prior to acquisition. The Facilities Operations Manager shall notify the Sustainability Office of newly acquired chemicals for inclusion into an updated version of this plan.

Cleaner Type	Brand Name	Sustainability Criteria Met
Hand Soap	Deb Products Azure Hand Soap	Green Seal GS-41, for industrial and institutional hand-cleaners US 2784, for hand cleaners and hand soaps UL EcoLogo 2783 for hand sanitizers US EPA Safer Choice Standard

Cleaner Type	Brand Name	Sustainability Criteria Met
General Purpose, Bathroom Glass and Carpet Cleaner	Hillyer #38 and #39	Green Seal GS-37
Cleaning and Degreasing Compounds	Hillyer #38 and #39	UL EcoLogo 2792
Hard-surface Cleaners	Hillyer #38 and #39	UL EcoLogo 2759
Carpet & Upholstery Care	Hillyer #39	UL EcoLogo 2795
Industrial and institutional floor care products;	EP-22	Green Seal GS-40

E. PERFORMANCE METRICS & MEASUREMENT

The practices listed above shall be implemented, to the extent practicable, with a target goal of 80% of products complying, based on cost. Sustainability staff will conduct a green spend analysis at least every four years to track our green spend on cleaning products. The analysis will be shared with the Facilities Operations Manager.

SECTION 6: CLEANING EQUIPMENT

This section details cleaning equipment that reduces the environmental impact of housekeeping practices.

The Campus Custodial Managers are responsible for confirming the operating sound levels for powered cleaning equipment. The Campus Custodial Managers shall ensure that custodial staff are enrolled in the Hearing Conservation Program as appropriate with their frequency and duration of work with powered cleaning equipment.

A. EQUIPMENT SPECIFICATIONS

The following equipment specifications are to be implemented whenever feasible.

- Vacuum cleaners are to meet the requirements of the Carpet & Rug Institute Green Label Program, are to be capable of capturing 96% of particulates 0.3 microns in size, and are to operate with a sound level less than 85 dBA in accordance with OR-OSHA 1910.95.
- 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.
- Hot water extraction equipment for deep cleaning carpets is to be capable of removing sufficient moisture such that carpets can dry in less than 24 hours.
- Powered maintenance equipment (including floor buffers, burnishers and automatic scrubbers) are to be equipped with vacuums, guards and/or other devices for capturing fine particulates and are to operate with a sound level less than 85 dBA in accordance with OR-OSHA 1910.95.

- Propane-powered floor equipment is to have high-efficiency, low-emission engines, and meet CARB or EPA Standards and operate with a sound level of 90dBA or less, in accordance with OR-OSHA 1910.95, as tested by ISO 11201.
- Automated scrubbing machines are to be equipped with variable-speed pumps to optimize the use of cleaning fluids and on-board chemical metering
- All battery-powered equipment is to utilize environmentally preferable gel batteries.
- Powered equipment is to be ergonomically designed to minimize vibration, noise and user fatigue, as reported in the user manual 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 to have rubber bumpers to reduce potential damage to building surfaces.
- A log is to be kept for all powered housekeeping equipment on the Google drive under **Green Cleaning Plan and Record Keeping** . This log is to document the date of purchase and all repair and maintenance activities.
- A vendor cutsheet is to be kept for all equipment both onsite and on the Google drive under **Green Cleaning Plan and Record Keeping** .
- Reusable/washable rags are to be utilized to clean surfaces throughout the building. Give preference to microfiber tools and wipes.
- Reusable/washable dust and wet mops are to be utilized.
- All products are to be recycled appropriately.

B. RECORD KEEPING

Custodial Managers shall maintain a log for all powered cleaning equipment to document the date of purchase and all repair and maintenance activities. The log and vendor cut sheets shall be stored with this plan on the Google drive under:

Green Cleaning Plan and Record Keeping . Vendor cut sheets should also be stored on site.

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 and stored on the Google Drive under

Green Cleaning Plan and Record Keeping .

C. APPROVED EQUIPMENT LIST

The equipment listed below is approved in the event of new equipment acquisition. Equipment beyond that listed here must be submitted to the Facilities Operation Manager for approval prior to acquisition.

Equipment Type	Manufacturer/Model	Sustainability Criteria Met
Vacuums	Pro Team/ Half Back Vacuum	CRI Green Label
	Pro Team/ Super Coach Pro	CRI Green Label
	Pro Team/Roller Vac	CRI Green Label

Equipment Type	Manufacturer/Model	Sustainability Criteria Met
	Taski BP Aero HEPA Filter	Operates at less than 70 dba
	Stick vac Numatic NQ 100	Operates at less than 70 dba
Floor Burnishers	Pioneer Eclipse/Propane Burnisher with SafeSense	Meets EPA/CARB requirements; operates at sound level less than 90dBA
	Clarke /Ultra Speed Burnisher (Electric)	Dust control; operates at sound level less than 70dBA
Exterior Pressure Washer	Honda GX340 (gas)	
Scrubbers	Tennant/ Eco H2O Auto-Scrubber (battery powered)	Operates at sound level less than 70dBA; chemical-free cleaning
	KleenRite/ M.A.C. cleaner machines (electric) (earlier models made by Cleanmaster Express)	Ergonomic design; steam cleaning
Restroom Cleaners	The Kaivac 1250/1750	

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SECTION 7: HARD-FLOOR AND CARPET MAINTENANCE

A. PRACTICES TO OPTIMIZE HARD-FLOOR AND CARPET MAINTENANCE

- The floor and carpet maintenance program at PCC is designed to use few, or no, harmful chemicals; remove and eliminate irritating dust, dirt and other contaminants; and protect and preserve floors.
- To minimize chemical use, PCC minimizes the frequency of stripping or removing coatings to an as needed basis and is able to maximize the floor's longevity, thereby conserving cleaning and floor restoration materials and minimizing occupants' exposure to harmful chemicals.
- A written floor maintenance plan shall be maintained, which details the number of coats of floor finish being applied as the base and other applications (top coat), along with all relevant maintenance/restoration practices and the dates and duration of these activities. This plan shall be stored with the Custodial Procedures book on the Google Drive: [Green Cleaning Plan and Record Keeping](#) of the custodial procedures manual shall be stored on the google drive. Physical copies are also kept with each custodial manager.

B. PERFORMANCE METRICS AND MEASUREMENT

Floor-care maintenance shall consistently be performed according to written protocols, without exception. Quality Control checks by the Custodial Managers will be used to ensure 100% adoption.

SECTION 8: ENTRYWAY SYSTEMS

For entryways and entrances into PCC Buildings that are equipped with walk-off mats or entryway systems:

- Walk-off mats at all primary entrances shall be cleaned periodically. These systems shall be a minimum of 10 feet long in the direction of travel.
- The walk-off mats shall be professionally cleaned on a regular basis and thoroughly vacuumed onsite periodically. The flooring beneath the mats shall be vacuumed and mopped periodically.
- Secondary entrances shall also have walk-off mats of 10–12 feet in length to capture initial loose particles entering the building. These mats must be vacuumed periodically, and the floor beneath shall be vacuumed and mopped on a periodic basis.

PERFORMANCE METRICS AND MEASUREMENT

Protocols promoting effective use of entryway systems shall be wholly adopted. Quality Control checks by the Custodial Managers will be used to ensure 100% adoption.

SECTION 9: HAND HYGIENE

All restroom facilities, including those in public areas and back-of-house spaces shall include appropriate hand soaps. (See Section 5, Sustainable Cleaning Products and Use of Concentrate.)

PERFORMANCE METRICS AND MEASUREMENT

Public protocols promoting hand hygiene shall be wholly adopted. Quality Control checks by the Custodial Managers will be used to ensure 100% adoption.

SECTION 10: HANDLING, DISPOSAL AND STORAGE OF CLEANING CHEMICALS

PERFORMANCE METRICS AND MEASUREMENT

Public protocols governing safe handling and storage of cleaning chemicals shall be wholly adopted. Quality Control checks by the Custodial Managers will be used to ensure 100% adoption.

A. PRACTICES TO OPTIMIZE HANDLING AND STORAGE OF CLEANING CHEMICALS

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

Storage

- All cleaning supplies are stored in locked and secured spaces in the warehouse or in custodial closets.

- All cleaning supplies and locations have been identified.

Chemical Dilution systems

(See Section 5, Sustainable Cleaning Products and Use of Concentrate.)

SDS Records

- SDS records can be found in the college's current online system.
- SDS records are managed by each college department.

Emergency Procedures

- All spills shall be handled in accordance with PCC's Emergency Operations Plan with regard to hazardous materials (see [PCC's Emergency Operations Plan](#) Annex-P).
- Environmental Health & Safety must be contacted if safe cleanup is a concern.
- Public Safety must be contacted if anyone is injured, property is damaged, or evacuation is needed.

B. PRACTICES FOR THE DISPOSAL OF CLEANING CHEMICALS

The disposal of expired/off-spec chemicals shall take place in accordance with the Environmental Health & Safety Regulated Waste Program ([PCC Health and Safety Manual Ch 21, Regulated Waste](#)).

SECTION 11: 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 PCC shall use only low/no VOC cleaning products; they shall perform routine cleaning and floor restoration activities after working hours when the majority of occupants have left the building; the staff shall limit the number of cleaning chemicals used in the building; and they shall maintain a high level of cleanliness thus minimizing the presence of irritants.

SECTION 12: OCCUPANT FEEDBACK AND EVALUATION OF NEW TECHNOLOGIES

PCC has implemented an electronic collection system (email and Service Request Center) for gathering occupants' feedback about the green cleaning program. Occupants are encouraged to alert the management to any issues relating to the green cleaning program.

PERFORMANCE METRICS AND MEASUREMENT

Feedback will be collected by the Service Request Center and reviewed by the Facilities Support Services Manager annually.

SECTION 13: TIME PERIOD

This program and plan shall take effect immediately and shall continue indefinitely or until amended and/or replaced by a subsequent green cleaning program and plan.

*Revised from 2016 Green Cleaning Policy and Plan

Resources

EPA Safer Choice Standard

SPLC Safer Chemicals, Quick Specs