
Healthy Green Schools & Colleges



HEALTHY SCHOOLS
CAMPAIGN

Healthy Green Schools & Colleges™ Standard for K-12 School Districts and Higher Education Institutions

DRAFT
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Healthy Green Schools & Colleges is a partnership between Green Seal®
and Healthy Schools Campaign.

Healthy Green Schools & Colleges Standard

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Overview: Healthy Green Schools & Colleges

The pandemic has made creating healthy school environments an urgent national priority and brought to light the serious under-investment in school facilities nationwide. However, even before the pandemic, nearly half of U.S. schools reported indoor air quality problems that put the health of students and staff at risk.

Unhealthy indoor air, inadequate ventilation, and chemical exposure from cleaning and maintenance routines continue to present systemic challenges in school districts. On top of health concerns, these issues are linked to poor concentration and test performance in students, adding preventable barriers to achievement.

A Standard by and for Facility Professionals.

School facility management professionals are vital stewards of school environments, making daily decisions that affect the health, safety and sustainability of places where students spend more than 1,000 hours a year. While they are experts at managing costs, these professionals often lack proper funding and resources for the essential work they do caring for students and staff.

Healthy Schools Campaign (HSC) and Green Seal have drafted the first national standard for healthy and sustainable school facilities, prioritizing measures that make a significant difference in indoor air quality without major capital investments.

The draft, science-based standard was designed in partnership with the award-winning school facility directors on the Healthy Green Schools & Colleges Steering Committee. It is geared toward K-12 school districts and higher education institutions and designed to be accessible for schools across the spectrum, whether they are just getting started exploring environmental health and sustainability improvements or are already a leader.

The Tools to Transform School Environments.

The Healthy Green Schools & Colleges standard will be the centerpiece of a comprehensive program designed to support school facility management professionals.

A self-assessment tool will allow schools to objectively measure their current indoor environmental health and sustainability performance, while guidebooks, training resources and other tools will help them determine and take their next steps. Then, a points-based scoring system will encourage schools to keep improving at their own pace, with support from a network of facility management peers across the country who are on a similar journey.

Schools that reach the top level of achievement will be able to apply for third-party certification, earning public recognition for their verified expertise in providing healthy school environments.

Seeking Feedback.

We develop standards through an open and transparent process that includes extensive stakeholder outreach and opportunities for public input. The public comment period is now open. Please submit comments to standard@healthygreeschools.org by Saturday, July 17, 2021.

Section 1: Getting Started

INTENT: To ensure the implementation of facility management practices that are healthy, safe, and sustainable.

REQUIREMENTS:

The school district facility management department shall have a plan, responsible party, and policy in place.

Policy Adoption.

Develop and obtain School Board approval of a district level policy for clean and healthy schools. If a policy has not yet been approved by the School Board, document the process undertaken to date to develop the policy and obtain approval.

Plan Development.

Create a documented district level plan with the input of relevant school stakeholders. The plan must include Standard Operating Procedures related to clean and healthy operations and maintenance across the district, schedules for routine and periodic cleaning operations, and details specific to each school site.

Responsible Party.

Convene relevant stakeholders to review the district level plan annually, at minimum. Include representatives from the following stakeholder groups, at minimum:

- Custodial
- Maintenance
- Grounds
- Food service
- Handler for contracted services
- Site level administrator
- Employee and/or teacher union representatives.

Other relevant stakeholders encouraged but not required to participate include:

- Transportation
- Parent Teacher Association/school community council
- Student/family representatives.

Create a written charge for the responsible party that includes scope of responsibilities and frequency of meetings.

Section 2: Training

***INTENT:** To ensure that cleaning and maintenance personnel work in the safest and most effective manner possible and receive appropriate training to promote health, safety, and sustainability through their work.*

REQUIREMENTS:

Through in-house or outsourced providers, deliver the following training on an ongoing basis.

Ensure the training needs of each staff member is met. Document training delivery accommodation requests (e.g., materials provided in a non-English language, transcripts from presentations or recordings where closed captions are not available) and accommodations provided.

Training for Cleaning Personnel

Initial Onboarding Training.

Upon hiring and completed within 1 year, provide all cleaning personnel with 12+ hours of training that covers at least the following topics:

- safe and effective handling and use of all cleaning products
- cleaning procedures
- use and maintenance of cleaning equipment
- safety training (see curriculum below)
- site specific training (see curriculum below)
- all procedures needed to conform to this standard
- communication with building occupants on why tasks are being completed
- an overview of this standard and how their work impacts health, safety, and sustainability

Safety Training.

Upon hiring and completed within 1 year as part of Initial Onboarding Training, provide Safety Training to all cleaning personnel that covers at least the following topics:

- reducing and preventing ergonomic injuries
- exposure to hazardous materials, including in site-specific locations such as chemistry laboratories
- proper storage and disposal of hazardous materials
- proper use and safe disposal of personal protective equipment
- proper rinsing and disposal of leftover cleaning products or their empty containers
- safe use of powered equipment to prevent injury

Site-Specific Training.

Upon hiring and completed within 1 year as part of Initial Onboarding Training, provide Site Specific Training to all cleaning personnel that covers at least the following topics:

- cleaning procedures for their assigned facilities
- facility-specific cleaning plan
- measures for protection of *vulnerable populations*
- communications escalation in the event of hazardous events

Annual Training.

Provide all cleaning personnel who have been on staff at least 1 year 24+ hours of annual training delivered through in-service, continuing education, or professional development, to maintain knowledge of correct procedures for safety, cleaning products, equipment, techniques, and relevant environmental standards.

Training for Other Personnel

Cross-Departmental Training.

Provide teachers, nurses, food service staff, maintenance and ground staff, and other school personnel training on their roles and responsibilities to ensure their actions support, not contradict, the plan.

Procurement Training.

Provide procurement staff annual training on selecting environmentally preferable cleaning products, materials, equipment, and various certifications.

Training Records.

Maintain records for each employee of all training required by this standard.

Records shall include:

- the topics included in the training
- a general outline of information covered
- the name and qualifications of the trainer
- the date(s) and duration of the training or courses

Retain records for all employees for all training throughout the duration of employment, and for one year after employee departure.

Skills Testing.

Use a simple pass/fail test or hands-on check with equipment to ensure the employee understands and can successfully implement skills taught during training. Maintain a record of skills testing alongside training records.

Training Curriculum Maintenance.

Conduct an evaluation of materials at least every 2 years to check for relevance and appropriateness. Update materials as needed.

Section 3: Communication

***INTENT:** To encourage clear and effective communication among cleaning staff, management, and school building administrators, staff, and students that will help all parties to develop trust and continually improve the School Specific Healthy and Sustainable Cleaning Plan.*

REQUIREMENTS:

Each school shall create a written plan for regular communications to school stakeholders. At minimum, communicate with the audiences on the topics described below.

Management.

Establish a channel for facilities and maintenance staff to provide comments and suggestions regarding the following topics, at minimum:

- efficacy of cleaning products, maintenance equipment, and policies and procedures
- coordination with pest control
- construction and building improvements
- the presence of pests
- maintenance issues
- interferences with cleaning or recycling operations

Ensure that the communication channel is ongoing. Information may be collected in a variety of ways most appropriate to the type of information communicated (e.g., feedback on future building improvements vs. the presence of pests in a building).

Building Occupants (Faculty, Staff, and Students).

Make available to all building occupants the School Specific Healthy and Sustainable Cleaning Plan on the School District's website and in hard copy in each building.

Vulnerable Populations.

Document the occurrence of situations where cleaning operations have the potential to adversely affect any identified members of a *vulnerable population* in a building. Provide communications as needed. Ideally, communicate in advance, and within 24 hours, of a required cleaning operation that has the potential to adversely affect a member of a *vulnerable population*.

Student Families and Community.

Communicate publicly that the school is seeking Certification and once it has achieved Certification under this Standard via signage at building entrance and within the building, and online through social media and the school's website.

Section 4: Procurement

***INTENT:** To ensure that the consumable and durable goods, tools, supplies, and equipment purchased by the school reduce negative environmental and human health impacts while also delivering effective functional performance.*

REQUIREMENTS:

For the following categories, purchase *environmentally preferable products* as defined below.

Consumable Goods

General Cleaning Products.

Purchase products certified to Green Seal or a relevant program listed in the U.S. EPA's Recommendations of Specifications, Standards, and Ecolabels for Federal Purchasing¹ for the following general cleaning products:

- general purpose (all purpose) cleaners and degreasers
- bathroom cleaners and deodorizers (includes hard surface, toilet, and urinal)
- glass, mirror, and window cleaners
- carpet, rug, and upholstery cleaners (includes routine and spot cleaning products)
- floor cleaners, strippers, sealers, and finishes
- hand soaps and hand cleaners.

Avoid using products that contain fragrances or colored dyes whenever possible.

Disinfecting Products.

Purchase disinfectants, including antimicrobial mold and mildew cleaners, that are on U.S. EPA's List N: Disinfectants for Coronavirus and contain only the following active ingredients:

- hydrogen peroxide**
- citric acid
- lactic acid
- ethyl alcohol (also called ethanol or just alcohol)
- isopropyl alcohol
- peroxyacetic acid**
- sodium bisulfate
- hypochlorous acid

¹ <https://www.epa.gov/greenerproducts/recommendations-specifications-standards-and-ecolabels-federal-purchasing>

**The combination of hydrogen peroxide and peroxyacetic acid is a designated asthmagen, so avoid products that contain both.

Avoid using products that contain fragrances or colored dyes whenever possible.

Sanitizing Products.

[Requirements for this section are in development. Please provide suggestions.]

Hand Sanitizing Products.

Purchase alcohol-based hand sanitizing products that are certified to Green Seal or a relevant program listed in the U.S. EPA's Recommendations of Specifications, Standards, and Ecolabels for Federal Purchasing.² Avoid using products with fragrances whenever possible.

Specialty Cleaning Products.

Purchase products certified to Green Seal or an equivalent listed in the U.S. EPA's Recommendations of Specifications, Standards, and Ecolabels for Federal Purchasing³ for the following specialty cleaning products:

- metal polish (including but not limited to chrome and brass cleaner)
- furniture polish
- graffiti remover
- gum remover
- lime and scale remover
- mildew removers

Avoid using products that contain fragrances or colored dyes whenever possible.

Paper Products.

Purchase toilet and facial tissue and paper towels and napkins certified to Green Seal or a relevant program listed in the U.S. EPA's Recommendations of Specifications, Standards, and Ecolabels for Federal Purchasing.⁴

Disposable Menstrual Products.

Purchase menstrual products that are biodegradable.

² <https://www.epa.gov/greenerproducts/recommendations-specifications-standards-and-ecolabels-federal-purchasing>

³ <https://www.epa.gov/greenerproducts/recommendations-specifications-standards-and-ecolabels-federal-purchasing>

⁴ <https://www.epa.gov/greenerproducts/recommendations-specifications-standards-and-ecolabels-federal-purchasing>

Trash and Recycling Can Liners.

Purchase plastic liners containing a minimum of 10% post-consumer recycled content or a thickness of less than 0.7 mils.

Ice Melt and Snow and Ice Removal.

Purchase ice melt products that do not contain chloride, including:

- sodium chloride
- magnesium chloride
- potassium chloride
- calcium chloride

Durable Goods

Receptacles and Dispensers.

For new purchases of dispensing systems for receptacles and dispensers, including hand soap dispensers, menstrual product receptacles, paper product dispensers, and hand sanitizer dispensers, purchase ADA compliant, touch-free systems.

Water Softeners for Drinking Fountains.

Use metered water softeners.

On-Site Electricity Generators.

For new generator purchases, purchase U.S. EPA Energy Star Certified or equivalent products.

Hand Dryers and Paper Towel Dispensers.

For new hand dryers and paper towel dispensers, purchase and install low-energy, touch-free systems.

Paints and Coatings.

Purchase products that are certified to Green Seal, GS-11 or a relevant program listed in the U.S. EPA's Recommendations of Specifications, Standards, and Ecolabels for Federal Purchasing.⁵

Tools and Supplies.

For new purchases of tools and supplies not covered in other sections:

- Use only formaldehyde-free ingredients.

⁵ <https://www.epa.gov/greenerproducts/recommendations-specifications-standards-and-ecolabels-federal-purchasing>

- Use microfiber cleaning cloths.
- Use ergonomic tools.

Floor Cleaning Accessories.

For new purchases of floor cleaning pads, brushes, and accessories, purchase products certified by Green Seal or a relevant program listed in the U.S. EPA's Recommendations of Specifications, Standards, and Ecolabels for Federal Purchasing.⁶

Filters.

For all powered equipment with filters, purchase the highest efficiency filters the equipment will support, as described in the equipment's filtration specifications. Use HEPA filters whenever possible, based on equipment specifications.

Stand Alone Air Filtration Units.

For all new unit purchases, select multi-filtration air filtration units with the capacity to provide four air changes per hour for the square footage in the space they are used. When possible, purchase the lowest decibel unit that satisfactorily meets the air change requirements.

Powered Equipment

Vacuum Cleaners.

For new equipment purchases, purchase equipment that meets the requirements of the Carpet and Rug Institute Seal of Approval/Green Label vacuum program or an equivalent listed in the U.S. EPA's Recommendations of Specifications, Standards, and Ecolabels for Federal Purchasing⁷, and operates at a sound level below 70 decibels (dBA).

Whenever possible, purchase lightweight, self propelled, ergonomic equipment.

Carpet Extraction Equipment.

For new equipment purchases, meet the requirements of the Carpet and Rug Institute Bronze Seal of Approval or an equivalent listed in the U.S. EPA's Recommendations of Specifications, Standards, and Ecolabels for Federal Purchasing.⁸

Whenever possible, purchase lightweight, self propelled, ergonomic, and low-water use (when appropriate) equipment.

⁶ <https://www.epa.gov/greenerproducts/recommendations-specifications-standards-and-ecolabels-federal-purchasing>

⁷ <https://www.epa.gov/greenerproducts/recommendations-specifications-standards-and-ecolabels-federal-purchasing>

⁸ <https://www.epa.gov/greenerproducts/recommendations-specifications-standards-and-ecolabels-federal-purchasing>

Powered Floor Maintenance Equipment.

For new equipment purchases, purchase products that effectively capture particles and operate at a sound level below 70 dBA.

Whenever possible, purchase lightweight, self propelled, ergonomic, and low-water use (when appropriate) equipment.

Propane Powered Floor Maintenance Equipment

New equipment purchases must have low-emission engines certified by the California Air Resources Board under the Small Off-Road Engines or Equipment program or equivalent, and be equipped with catalytic and exhaust monitoring.

Whenever possible, purchase lightweight, self propelled, ergonomic, and low-water use (when appropriate) equipment.

Outdoor Groundskeeping Equipment

Whenever possible, purchase lightweight, self propelled, ergonomic, and low-water use (when appropriate) equipment.

Section 5: Facilities Operations and Maintenance

Facility Cleaning

***INTENT:** To reduce exposure and injury risks to cleaning staff and reduce the environmental impacts of facility operations and maintenance.*

REQUIREMENTS:

Within each school site, meet the relevant requirements below.

For all job tasks, provide cleaning staff with instructions on procedures in languages spoken by the personnel implementing the procedures.

Cleaning by Hand.

- Determine opportunities to replace single use cleaning products with reusable cleaning cloths.
- Use a standard color-coded microfiber cloth system, with different colors for each area, surface type, or task.⁹
- Follow the below protocol for microfiber cloth maintenance:
 - Store cloths used for restroom cleaning or on contaminated surfaces in a separate container after use and clean and *disinfect* as soon as possible.
 - Clean and *sanitize* microfiber cloths used for general cleaning within 2 hours of use and/or at the end of each shift.
- Ensure cleaning methods are compatible with the item being cleaned to avoid premature surface degradation.
- All employees must wear proper Personal Protective Equipment (PPE) when cleaning by hand unless the cleaning product SDS states no PPE is required.
- When spray bottles are necessary for product application, train personnel to spray product into cloth rather than onto surface or into air.

Sanitizing Tasks.

- All employees must wear proper PPE when conducting sanitizing tasks unless the product Safety Data Sheets (SDS) states no PPE is required.

Disinfecting Tasks.

- Follow the U.S. EPA's 6 Steps for Safe and Effective Disinfectant Use¹⁰
- Always follow product label directions for preparing disinfection solutions.

⁹ For example:, Red Cloths for sanitary appliances, restroom floors, toilets, and urinals, Yellow Cloths for restroom sinks, towels, hand dryers, soap dispensers, doors, walls, etc., Green Cloths for eating areas, lunch rooms, break rooms, kitchenettes, etc., Blue Cloths for low-risk areas including common rooms, offices, classrooms, etc.

¹⁰ <https://www.epa.gov/coronavirus/six-steps-safe-effective-disinfectant-use>

- Wear proper PPE and safely dispose of materials and supplies after use.
- Clean and *disinfect* high-touch surfaces at least once per day, or more frequently as needed.
- Do not use products that contain quaternary ammonium compounds (quats).
- Only use approved disinfectants in compliance with the school's procurement policy. In instances where a non-compliant product may be required, document the specific situation and why a non-compliant product was needed.

Cleaning with Powered Equipment.

Establish procedures for the use of powered equipment in order to clean effectively with minimum environmental impact.

- Ensure that any backpack vacuums, blowers, electrostatic sprayers, etc. have ergonomic harnesses and are properly fitted.
- Follow manufacturer's recommendations for powered equipment battery maintenance, storage, and charging. Staff must wear appropriate PPE when checking acid batteries.
- Inspect vacuum bags or canisters after every two hours of use. Replace bags or empty canisters when half full or when indicated by a bag sensor.
- [Ensure powered equipment is properly maintained.](#)

Location Specific Cleaning Requirements

Implement the following requirements in each building location.

For each space type described below, ensure personnel are aware of the process for reporting and communicating maintenance issues in need of repair, such as leaks, burned out lights, etc.

Food Service, Dining Areas, and Break Rooms.

- Clean and *sanitize* surfaces in food preparation and consumption areas at least daily, and more frequently as needed.
- Clean and *sanitize* surfaces touched by hands daily or more frequently as needed.
- Clean and *sanitize* containers used for food waste daily. Empty waste containers once per day and when full.
- Implement periodic ATP Monitoring¹¹ for food preparation surfaces.

Restrooms.

- List the equipment and cleaning supplies that must be used to comply with this standard and the school's restroom needs.
- Clearly label the equipment used for restroom cleaning (e.g., with a permanent marker or by color) as designated for restroom-only cleaning. Store all equipment for the cleaning of restrooms separately from other cleaning equipment, and maintain a written list of equipment and where it is located.

¹¹ **ATP Monitoring** is a rapid testing method used to quickly assess the cleanliness of surfaces or liquid samples.

- Conduct restroom cleaning from high to low, toward the doorway, with dry cleaning tasks performed before wet cleaning operations.
- Clean and *disinfect* areas where pathogens can collect and surfaces touched by hands daily, and more frequently in the event of high traffic volume or high occupancy levels.
- Remove standing moisture from the floors and bathroom surfaces.
- Designate color-coded cleaning process to ensure cloths used on toilets and urinals are not used on other surfaces. See “Cleaning by Hand and with Microfiber Cloths”
- Pull bathroom trash liners and *disinfect* trash receptacles at least once a day.
- Provide adequate water deposits to effectively maintain the drain traps. If there are drains that do not receive regular wet cleaning operations, identify them and determine a maintenance process.
- Replenish all consumable supplies daily.
- Require tracking and logging daily high touch-point cleaning activities for verification.

Laundry.

- Use the warmest appropriate water setting and dry items completely.
- If handling dirty laundry from a person who is sick, wear gloves and a mask.
- Clean clothes hampers and laundry baskets after they have held dirty laundry.
- Wash hands after handling dirty laundry.
- Use an automated detergent dispensing system.

Entryways.

- Clean outside entryways daily.
- Place walk-off matting at all building entryways: 6-10 feet of scraper/wiper matting, followed by 6-10 feet of wiper matting.¹²
- Vacuum matting daily, and as needed to prevent tracking of contaminants into the building.
- Evaluate matting regularly to ensure they stay in place during periods of high foot traffic, and that there is no bunching or curling edges. Replace worn or heavily used matting as needed.

Laboratories.

[Requirements for this section are in development. Please submit suggestions.]

Outside Cleaning.

[Requirements for this section are in development. Please submit suggestions.]

Floor Maintenance

***INTENT:** To establish a uniform, consistent process by which hard-floor surfaces in the building*

¹² Exceptions: Smaller mat sizes may be accepted if the entry space is too small for the required sizes.

will be cleaned and maintained, using healthy and sustainable practices, products and tools.

REQUIREMENTS:

Within each school site, meet the relevant requirements below.

Routine Floor Maintenance.

For routine floor maintenance, vacuum floors or use mops equipped with reusable microfiber mop heads.

- Clean floors on a predetermined schedule and as needed to keep them clean.
- Scheduled daily cleaning for heavy traffic areas, including entrances, corridors, break areas, congested areas, main passageways, and primary work or office areas.
- Vacuum or mop as necessary to keep clean light traffic areas including conference rooms, administrative offices, auditoriums, media centers, limited access areas, and other areas or spaces with limited or periodic use.

Periodic or Restorative Maintenance.

For periodic and restorative maintenance of floors:

- Schedule floor stripping and refinishing during periods of minimum occupancy.
- Provide reasonable notice to building occupants before non-routine floor maintenance operations. Establish the timing and method of the notice in consultation with building management.
- Ensure that sufficient floor finish exists on the floor surface before performing periodic maintenance, in order to avoid damage to the flooring.
- Avoid spraying floor restoration chemicals.
- Perform restoration only when needed, rather than on a predetermined schedule.
- Use burnishing or buffing equipment capable of capturing the dust generated by the equipment.
- Ventilate the area to the outside if possible, both during and after floor stripping, floor scrubbing or recoating.

Carpet Cleaning and Maintenance

INTENT: To establish a uniform, consistent process by which carpets/soft flooring in the facility will be cleaned and maintained, using healthy and sustainable practices, products and tools.

REQUIREMENTS:

Routine Maintenance.

For routine carpet maintenance, vacuum carpets on a predetermined schedule, and as needed to keep them clean.

- Vacuum daily: heavy traffic areas, including entrances, corridors, break areas, congested areas, main passageways, and primary work or office areas.

- Vacuum periodically to keep clean: light traffic areas including conference rooms, administrative offices, auditoriums, media centers, limited access areas, and other areas or spaces with limited or periodic use.

Interim/Restorative Cleaning.

Implement the following strategies:

- Provide reasonable notice to building occupants before interim or *restorative carpet cleaning* operations.
- Perform carpet extraction only as needed rather than on a regular schedule.
- Clean carpets so that they will dry in less than 4 hours.
- Schedule carpet extraction during periods of minimum occupancy.
- Take adequate precautions to limit worker exposure to dust and particulate matter from vacuum cleaners when cleaning and replacing bags and filters.
- Do not use propane-powered equipment indoors when the building is occupied.
- Provide the maximum air circulation and exchange possible when using propane powered equipment indoors.

Waste Handling and Recycling

INTENT: To implement healthy, safe, and sustainable cleaning practices, maintain a waste-free environment, and prevent inappropriate odors and pests.

REQUIREMENTS:

Within each school site, meet the relevant requirements below.

Waste and Recycling Storage.

- Store all recyclable waste items in separate containers to be recycled.
- Dispose of trash outside in covered containers away from the immediate exterior of the building.
- [Requirements for compost storage are being developed. Please submit suggestions.]

Waste and Recycling Collection.

Waste/Trash. For waste containers not addressed elsewhere in the standard, implement the following requirements:

- Remove trash and replace liners daily if possible or when they are soiled from wet trash or food, or become broken.
- Dispose of all trash before weekends and holidays.
- Ensure personnel have tools (e.g., reachers) that allow for safe and ergonomically appropriate trash collection.

Recycling. Where a recycling program exists, implement the following requirements:

- Inspect recycling areas daily, including collection bins, and clean them if they are dirty.
- Ensure that the recycling stations are marked clearly. Properly label recycle bins to ensure occupants know what materials can be recycled
- Collect recyclable materials that have come in contact with food or beverages and remove them from the building before weekends and holidays.
- Determine, together with the facility management personnel:
 - procedures for rinsing and separation of recyclables
 - locations and procedures for collecting recyclables
 - how to ensure that recycling stations are accessible
- Periodically review the status of the recycling program, including effectiveness and any problems regarding separation or collection of recyclable materials.

Compost. Where a compost program exists, implement the following requirements:

- Empty food compost containers on a daily basis or as needed
- Empty paper towel compost once a week

Communication. Display easy-to-understand instructional signage at all public waste collection stations. Provide education and outreach to your community to engage them in waste diversion action.

Back of House Procedures

INTENT: To promote safety and reduce risk of injuries from chemical and equipment handling and management.

Material Handling and Storage

INTENT: To maximize cleaning efficacy and minimize product inventory levels, while minimizing the negative impacts to human health and the environment.

REQUIREMENTS:

Implement the following strategies for safe material handling and storage.

- Establish locations for the storage of cleaning products within the facility, and establish requirements for proper ventilation, adequate security, safety, and proper management of the area.
- Implement a First In, First Out Chemical Usage Policy. The policy should cover, at minimum, the following:
 - approved chemicals for purchase
 - procedures for labeling, dating, and inspecting materials when they are received
 - keeping records for date of receipt
 - using old stock of chemicals first
 - labeling chemicals with a “date opened” sticker to track original use
 - inventorying of materials
 - disposal procedures for expired or damaged chemicals or product containers

- Keep the chemical inventory posted in the storage area to clearly articulate the current list of supplies, and help identify products in need of ordering.
- Dilute cleaning products in *concentrate* form using *dilution control* that limits worker exposure.
- Provide easily understood directions for the dilution of cleaning products to cleaning staff in their spoken language.
- Place Cleaning Dilution Control stations on a routine maintenance and check schedule (need to ensure proper dilution ratio annually or as needed). Conduct periodic strip tests (chemical test strips) to ensure proper chemical ratio is produced.
- Ensure proper labeling of chemicals in storage, as well as hand-held spray bottles.
- Require all employees to wear proper PPE, per product SDS, when handling chemicals.
- Provide directions for the proper rinsing and disposal of leftover cleaning products and empty containers.
- Keep SDSs readily available and their location should be communicated to all staff.
- Create a spill kit for any enclosed room where chemicals are stored with at least the following materials, as necessary:
 - a container to hold spill debris.
 - granular absorbent, absorbent pads and broom, as appropriate.
 - plastic dustpan and broom for sweeping up granular absorbent. For flammable materials, ensure the dustpan is a spark-free tool.
 - for larger spills, consider a pump to empty leaking drums as well as plugs and patching materials for drums.
 - rags to wipe up smaller areas.
 - labels (e.g., Hazardous waste stickers) to properly mark containers of spill debris.
 - forceps, tongs, or other tools to pick-up contaminated debris or broken glass.
 - oil absorbent brooms.
 - written Chemical Spill Kit Procedures and Instructions, in all languages used by staff.
 - basic first aid kit
 - Hydrofluoric Acid: Calcium gluconate gel (2.5%) for skin contact
 - Chloroform/Phenol: Isopropanol, polyethylene glycol 300, or polyethylene glycol 400 for skin contact

Powered Equipment Maintenance

INTENT: To minimize the impact on occupant and user safety, health and environment from powered equipment.

REQUIREMENTS:

Within each school site, meet the relevant requirements below.

General Powered Equipment Maintenance.

Implement the following requirements:

- Ensure that the equipment functions properly or is tagged out of service.
- Use equipment for its full service life.
- Develop a plan for the phase-out of equipment.
- Establish a quarterly maintenance program to inspect and maintain all equipment, according to manufacturer recommendations.

- Use a maintenance log to keep a record of cleaning and repairs.
- Ensure equipment is cleaned of old product used (e.g., oil).
- Establish a battery maintenance schedule.
- Store equipment properly per manufacturer's recommendation.

Vacuum Cleaner Maintenance.

Implement the following requirements:

- Equip vacuum cleaners with the proper filter or bag; change or clean filters according to manufacturer recommendations.
- Take precautions to limit worker exposure to dust and particulate matter when cleaning and replacing bags, filters and HEPA if applicable.

Section 6: Building Systems Maintenance and Repairs

***INTENT:** To protect the health and safety of building occupants through a comprehensive plan that addresses preventative maintenance, routine maintenance, and reactive maintenance.*

REQUIREMENTS:

- Use a computerized maintenance management system (CMMS).
- Establish and document a response plan that prioritizes issues based on their scope, urgency and impact on the safety, health, and wellness of building occupants.
- Establish a pathway to increase transparency on reporting outcomes from the maintenance management plan.

Heating, Ventilation, and Air Conditioning (HVAC) Systems.

***INTENT:** To ensure the proactive, preventative, planned and reactive maintenance of all installed HVAC devices and fixtures to maximize their period of usefulness; to promote a high standard of air quality.*

REQUIREMENTS:

Establish and document a maintenance plan, including at minimum the following requirements:

- Provide outdoor air ventilation according to the American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE) Standard 62.1-2016 or local code.
- Use MERV 13 filters or the highest rated filter the existing system will allow.
- Inspect HVAC systems regularly. Change filters quarterly, ensure proper filter fit, and confirm that condensate pans are draining.
- Regularly clean air supply diffusers, return registers, and outside air intakes.
- Ensure that outside air intakes are working properly. Ensure no standing water is in the vicinity of the air intakes.
- Ensure that your building automation system plus all dampers, actuators, and physical system components are working as designed.
- Anticipate replacement plan based on life-cycle cost of the equipment
- Where adequate ventilation and air exchange for occupancy level per CDC Guidance for Ventilation in Schools and Childcare Programs¹³ is not provided through the HVAC system alone, provide supplemental air cleaning systems for all classrooms and other areas of assembly (e.g., open windows, UV-C, bipolar ionization,¹⁴ or stand alone HEPA filtration units, etc).

¹³ <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/ventilation.html>

¹⁴ Only bipolar ionization units that meet UL 2998 standard certification (Environmental Claim Validation Procedure (ECVP) for Zero Ozone Emissions from Air Cleaners)

Water.

INTENT: To provide a safe, potable water distribution system for building occupants. To provide testing and treatment of non potable water usages.

REQUIREMENTS:

Establish and document a maintenance plan, including at minimum the following requirements:

- Establish a potable water testing protocol that is in compliance with the U.S. EPA's 3Ts for Reducing Lead in Drinking Water Toolkit.¹⁵
- Create and document an action plan in the event an emergency creates water quality issues.
- Ensure any new plumbing installed is compliant with the Safe Drinking Water Act (NSF/ANSI 61 Annex G).
- Ensure any solder used for plumbing providing drinking water is of 95/5 composition.
- Establish a water treatment protocol for cooling towers. Document testing.
- Establish a maintenance protocol for backflow preventers, floor drains and air gaps.
- Follow the Center for Disease Control and Prevention (CDC) guidance for restoration of services to dormant buildings or fixtures when needed.

Pest Management.

Create and implement an Integrated Pest Management Plan using the U.S. Green Building Council's Integrated Pest Management Plan Template,¹⁶ which covers:

- Goals/Performance Measurement
- Roles and Responsibilities
- Standard Operating Procedures And Implementation Strategies for
 - Pest Control
 - Pesticide Application Notification
 - Building Occupant Communications Plan
 - Action Thresholds for Various Pests
- Performance Measurement and Schedule for Reassessment
- Quality Assurance/Quality Control Processes

Comply with the requirements of the U.S. Green Building Council's Integrated Pest Management Credit, as found in LEED O+M: Existing Buildings, v4.1, Indoor Environmental Quality - Integrated Pest Management.¹⁷

Ensure workers adhere to relevant personnel licensing requirements.

¹⁵ <https://www.epa.gov/ground-water-and-drinking-water/3ts-reducing-lead-drinking-water-toolkit>

¹⁶ <https://www.usgbc.org/resources/v41-egc-integrated-pest-management-plan-template>

¹⁷ <https://www.usgbc.org/credits/existing-buildings-interiors-existing-buildings-retail-existing-buildings-schools-0?return=/credits/Existing%20Buildings/v4.1>

Sidewalk, Pavement, and Grounds Maintenance.

Site Management Plan

Create and implement a Site Management Plan using the U.S. Green Building Council's Site Management Policy Template,¹⁸ which covers:

- Goals/Performance Measurement
- Roles and Responsibilities
- Standard Operating Procedures And Implementation Strategies for
 - Maintenance Equipment
 - Snow and Ice Removal
 - Erosion and Sedimentation Control
 - Addition of Organic Matter Mulch to Planting Areas
 - Invasive and Toxic Species Management
 - Fertilizer Usage
 - Herbicide, Pesticide, And Fungicide Usage And Integrated Pest Management Plan
 - Irrigation Using Automatic Controlled Systems
 - Irrigation Management
 - Storage of Materials and Equipment
- Performance Measurement and Schedule for Reassessment
- Quality Assurance/Quality Control Processes

Comply with the requirements of the U.S. Green Building Council's Site Management Credit, as found in LEED O+M: Existing Buildings, v4.1, Sustainable Sites - Site Management.¹⁹

Ensure workers adhere to relevant personnel licensing requirements.

Hardscape and Pavement Maintenance

Monitor the condition of entryways, sidewalks, parking areas, and roadways on school sites for damage and disrepair. On an as needed basis, replace cracked and sunken concrete, potholes in pavement, etc. to reduce the potential for injuries.

¹⁸ <https://www.usgbc.org/resources/v41-ssc-site-management-policy-template>

¹⁹ <https://www.usgbc.org/credits/existing-buildings-interiors-existing-buildings/v41/ss118?return=/credits/Existing%20Buildings/v4.1>

Section 7: Monitoring and Evaluation

Indoor Air Quality Testing/Monitoring and Energy Management

INTENT: To ensure processes, procedures and tools are in place to monitor indoor air quality, while balancing the impact of HVAC on energy consumption.

REQUIREMENTS:

Establish and implement a plan to monitor indoor air quality, including monitoring frequency, contaminants to monitor, acceptable levels, and action plans for addressing excessive concentrations. Include at least the following contaminants:

- Carbon Dioxide (CO₂)
- Mold
- Mildew
- Volatile Organic Compounds (VOCs)
- Radon
- Other elements that affect indoor air quality, such as bus diesel exhaust, sewer gas, and natural gas venting.

Implement the following strategies as appropriate for testing and monitoring.

- Utilize at a minimum handheld and logging monitors to monitor CO₂ levels during times of occupancy.
- Create and document an action plan for when CO₂ levels exceed 900 ppm. Create and document an action plan in the event an emergency creates air quality issues.
- Create an action plan for addressing mold and mildew, radon, volatile organic compounds (VOCs), and other elements that affect indoor air quality, such as bus diesel exhaust, sewer gas, and natural gas venting.
- Monitor relative humidity to maintain industry accepted standards as described in the U.S. EPA Tools for Schools Program.
- Develop and implement an Asbestos Hazard Emergency Response Act (AHERA) Management Plan for asbestos remediation.
- Develop a risk management plan and, when required, use third party testing.

Performance Measurement/Metrics and Data Tracking

INTENT:

Use data to strategically inform budget and operations decisions.

REQUIREMENTS:

- Document the size and age of facilities.
- Track the amount of work orders written against building inventory.
- Identify the exact nature of the need to use the right staffing resources.

Staffing Formulas

INTENT:

Ensure the operation is properly staffed to execute the mission assigned based on industry best practices.

REQUIREMENTS:

- Staffing formulas shall be used when making staffing decisions.
- These formulas should consider building size, occupant load, and space usage.

Glossary

Concentrate. A product that must be substantially diluted with water to form the appropriate solution for use (typically at least 1:16).

Dilution Control. A procedure that controls the proper dilution of a concentrated product while limiting worker exposure. Examples include tablets, dissolvable film pods, closed dilution systems, and pre-measured pouches.

Disinfect. Destroying infectious microorganisms present on hard surfaces.

Environmentally Preferable Product. A product certified as such by a Type 1 (i.e., third-party) environmental label that was developed in accordance with the ISO 14024 Environmental Labeling Standard. Alternatively, a product may be designated as environmentally preferable by an established and legitimate, nationally-recognized program developed with the purpose of identifying environmentally preferable products. The program must not have any financial interest or stake in sales of the product, or other conflict of interest. Such designation must be based on consideration of human health and safety, ecological toxicity, other environmental impacts, and resource conservation, as appropriate, for the product and its packaging, on a life cycle basis. Product criteria must distinguish market leadership for that product category, and be publicly available and transparent.

Restorative Carpet Cleaning. Used when accumulated soils and cleaning residues need to be extracted to return the carpet to a relatively clean (free of unwanted matter) condition or when interim cleaning systems are not achieving desired results.

Sanitize. Reducing microorganisms to levels specified by public health codes or regulations.

Vulnerable Population. Occupants, customers, or employees who are more susceptible than the general population to health risks that may be posed by cleaning operations. Examples of such populations include children, pregnant women, asthmatics, the elderly and infirm, and people with chemical sensitivities (e.g., to fragrances).