

# Montgomery County Public Schools

## Healthy, High Performance, “Green” Cleaning Program

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## Section I – Summary

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Montgomery County Public Schools, Division of School Plant Operations (DSPO) is committed to providing a healthy facility environment that is conducive to student learning, and employee productivity. The DSPO also recognizes its social responsibility to protect natural resources for future generations. As a result of this commitment to students, staff and the environment, the DSPO has developed this Healthy, High Performance Cleaning (HHPC) program with guidance from the MCPS Systemwide Safety Unit.

The DSPO HHPC approach consists of six essential components; products, equipment, processes, certification, audit and collaboration. It includes use of chemicals and equipment that have been certified as environmentally preferable by independent organizations such as Green Seal and the Carpet and Rug Institute. Documented best practices for accomplishing tasks i.e. Systematic Team Cleaning, Integrated Pest Management and the School Energy and Recycling Team (SERT) are also a part of this plan. The DSPO places high strategic value on maintaining sustainable operations and therefore will continue to monitor buildings for adherence to LEED criteria by performing regular quality assurance inspections. MCPS Systemwide Safety Unit also monitors and provides guidance to DSPO and school staff on the proper use and storage requirements of products.

Details on how to implement the HHPC program are included in Section III. Requirements for cleaning practices, including how cleaning products are to be stored, specific methods for cleaning (what is required and what is not allowed), a cleaning frequency schedule, custodial equipment operational standards and requirements for disposal and recycling are identified. Referenced standards that must be met when purchasing cleaning products, including a list of prohibited ingredients are provided. This also includes specific product recommendations that meet the required standards. Requirements for grounds care and mechanical systems operations are also identified. Last, but not least, are the requirements for staff training. Section D provides additional resources, including product manufacturers, and Section E is a glossary of terms used in this plan.

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## Section II – Statement of Purpose

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The Healthy High Performance Cleaning Program serves two primary functions. First, the plan informs facility managers and educates the building service staff at all MCPS schools on how to achieve “green housekeeping” requirements.

Second, the plan serves as the US Green Building Council (USGBC) LEED™ submittal to demonstrate the intent for a “green cleaning & housekeeping” innovation credit has been met for MCPS Division of Construction projects.

The plan documents the school system’s commitment to purchase and safely use cleaning and grounds care products and methods that reduce adverse impacts on public health and the environment. Cleaning methods set forth herein emphasize the removal of indoor pollutants (including soils, particulates, microbes, etc.) while maintaining a safe and healthy environment for all students, workers and other building occupants. The goal is to minimize the amount of product used as well as the amount of waste that is created. Products that fall under this plan include general purpose, restroom, glass, and carpet cleaners, disinfectants, floor care products, hand soaps, paper supplies for cleaning, and paper supplies for restrooms. The product recommendations included in this plan are meant to provide current examples of acceptable cleaning products; however, substitute products may be used, provided they meet the criteria set forth in this plan.

The HHPC program also includes operational standards to ensure effective equipment performance, and energy conservation. Training, involvement and close collaboration with students, staff and the community is also a key component of the program promoting environmental principles beyond the school walls.

Finally, the HHPC plan is a living document; one that will be revised and amended as better practices are identified.

### **Guiding Principles for MCPS Healthy High Performance Cleaning**

The following principles represent the core values that inspire commitment and corresponding actions to ensure effective deployment of this plan.

1. **Every day, every student has the right to a healthy and safe school environment.** Every adult is accountable and personally responsible for protecting the health and safety of students. Every adult is expected to work collaboratively to sustain a healthy and safe environment by:
  - a. Recognizing the factors that contribute to an unhealthy environment
  - b. Knowing how what they do contribute to the environment (we must all be responsible for our impact on the environment)
  - c. Taking corrective actions and/or notifying appropriate staff necessary to restore the environment to healthy conditions
2. **The DSPO will provide training and communicate with staff and community** users to educate them on the value of HHPC on the health and academic performance of students as well as the personal and environmental benefits of a successful program.
3. **Every employee has the right to work in a healthy and safe environment.** Workplace conditions are regularly evaluated to minimize worker/occupant exposure to harmful contaminants and cleaning residues. Systemic processes are in place to assure compliance with OSHA standards, safe operating procedures, and use of safe tools, equipment and supplies. Proper procedures, potential hazards and safety information are documented, clearly communicated to workers and readily available for review.
4. **What gets measured gets done.** The DSPO uses an automated inspection tool, to evaluate and manage school facilities for key environmental, safety and health issues. This tool is used to monitor and verify that HHPC standards are being maintained. Regular assessments of school facilities are performed to track and manage information on environmental conditions. Information from these assessments is used to ensure consistent application of the standards throughout the school and drive improvement.
5. **Effective cleaning that ensures consistent, thorough cleaning is achieved by applying systematic approaches to work planning and work flow considering the entire school campus and programs; including building, grounds and activities.** The DSPO staff use systematic work plans and custodial and grounds equipment that minimize student exposure to noise, dust, cleaning residues and exhaust fumes. Specialized duties are assigned to each staff member so that the amount of time necessary to accomplish tasks is minimal, the quality of cleaning is consistent throughout the building and the potential for occupant exposure to adverse affects is limited.
6. **Effective management of the exterior environment is essential to ensure healthy conditions are sustained in the interior environment.** The HHPC plan aims to minimize pollutants entering the building, while maximizing the amount of pollutants extracted.

7. **Healthy, High Performance Cleaning can be accomplished while the amount of chemicals used and moisture accumulated and/or released into the air is limited.**
8. **Emergency response plans ensure rapid restoration of areas affected by unexpected incidents such as serious incidents, natural and man-made disasters and other emergencies.**
9. **Disposal of cleaning waste in environmentally safe ways preserve and protect the local ecology.**
10. **Regularly scheduled preventative maintenance on HVAC systems ensures healthy, indoor air quality, climate control and longevity of equipment.** The DSPO uses comprehensive building maintenance plans, employee training and quality assurance inspections to effectively operate and maintain mechanical systems.
11. **Together, we can make a difference.** Training, involvement of and close collaboration with students, staff and the community ensures sustainability of the HHPC Program.

## **Section III – Requirements & Product Recommendations**

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### **A. Cleaning Practice Requirements**

The HHPC objectives for maintaining the interior of schools are to maximize the amount of pollutants extracted, minimize worker/occupant exposure to harmful contaminants and cleaning residues, minimize the amount of chemicals, particles, and moisture accumulated and/or released into the air by the cleaning process, and dispose of cleaning waste in a safe and environmentally responsible manner.

To ensure that these objectives are accomplished, the DSPO utilizes a Systematic Team Cleaning (STC) approach that maximizes the quality, quantity and consistency of building services. STC also reduces error and equipment and energy costs. This approach systematizes the application of personnel, tasks, frequency, time and space to get the most out of the cleaning process. Additionally, quality assurance inspections are performed daily by onsite staff and as scheduled by offsite supervisors.

#### **1. Storage Requirements for Cleaning Products**

- a. Containers will be securely closed when not in use
- b. Storage areas that contain cleaning products will be fully ventilated
- c. Custodial closets and storage areas will be kept clean and free of standing water
- d. Used cloths and wet mops will be rinsed after each use; hang up to dry (do not leave wet items in sinks or buckets)
- e. Dispensing equipment that minimizes worker exposure will be used
- f. Follow manufacturers use instructions and material safety data sheet (MSDS) requirements/instructions

#### **2. Cleaning Procedures**

- a. Reducing chemical use - The goal is to minimize occupant and worker exposure to aggravating or harmful chemicals released into the indoor environment during cleaning processes. Particular attention is given to floor maintenance procedures that minimize or eliminate chemical use.

- i. Apply durable floor finishes; deep-scrub with floor cleaner and re-coat finish as necessary (avoid the use of floor strippers)
- ii. Scrub floors regularly to remove dirt and embedded marks in floor finishes (to reduce the need for stripping); perform floor scrubbing when students and other occupants are not present in the immediate area
- iii. Ensure cleaning schedule meets actual needs to avoid redundant cleaning
- iv. Use microfiber mops and cloths that do not require application of chemicals, and which reduce the use of disposable paper towels
- v. Spot clean with scouring pad first; use cleaning solution only as required
- vi. Use a solution of 4 oz. vinegar to 4 gallons cold water for rinsing

**b. Product dilution**

- i. Dilute all concentrated cleaning chemicals per manufacturer recommendations for each application
- ii. Use lowest concentration possible for each application

**c. Reducing dust and dirt**

Effective dusting, dust mopping, and vacuuming thoroughly captures dust particles and prevents them from circulating into the air, moving to other surfaces, or being draw into ventilation equipment.

- i. Provide roll-up mats at each outside door; vacuum and spot clean roll-up entryway mats daily and use carpet extractor with wand attachment weekly – *proper and frequent entryway cleaning reduces outdoor contaminants from being spread throughout the building, which extends the longevity of the flooring systems and reduces the need for floor maintenance tasks (such as stripping and applying additional coats of floor finish)*
- ii. Replace mats when there is visible surface wear
- iii. Vacuum or damp-mop instead of sweeping
- iv. Use vacuum cleaners that have four levels of filtration, DBA rating under 70 and meet other standards for CRI Green Label
- v. Change vacuum bags when they are 3/4 full; check bags prior to each use
- vi. Use a damp cloth or microfiber cloth to remove dust
- vii. Use burnishers or high-speed buffing machines that are equipped with vacuum attachments and dust prevention skirts.

**d. Reducing microbial growth**

- i. Wet-cleaning equipment for carpets should have high-quality extractors that leave carpeting dry to prevent microbial growth
- ii. Apply disinfectants where/when required; allow 3-5 minutes for disinfectant to take effect prior to cleaning. Use all purpose cleansers instead of bleach to remove microbes
- iii. Change mops and cloths on a regular basis; at a minimum, wash and rinse thoroughly after each use, replace mop heads and cloths when they smell or show visible dirt or have been used to clean up a blood spill
- iv. Ensure that mops are allowed to dry completely between uses; mops should be hung in janitorial closet on hooks provided, *not* stored in buckets or slop sink
- v. Clean areas where water collects or condenses

**e. Restroom cleaning**

Effective restroom cleaning procedures remove harmful germs and bacteria that may be present on door handles, fixtures, walls, floor and floor drains, and other surfaces. All of these must be cleaned and disinfected regularly to prevent the spread of contagious illnesses. Since restrooms are heavily used, use a schedule to ensure that they are refreshed frequently. Refresher schedules shall include restocking of hand soap, toilet paper, and paper towels, as well as spot cleaning where required.

- vi. Clean daily all: floors, counter tops, basins, toilet partitions, toilets, urinals, light switches, mirrors, door knobs, and showers
- vii. Disinfect floors, counter tops, basins, toilets, urinals, and showers daily (after cleaning) using an approved hospital grade disinfectant to prevent MRSA and bloodborne pathogens
- viii. Ensure floor drains are operating properly

**f. Food preparation and eating areas**

- i. Clean daily all: floors, counter tops, basins, appliances/equipment, light switches, and door knobs
- ii. Disinfect floors, counter tops, and basins daily (after cleaning)
- iii. Clean all surfaces that come in contact with food preparation after each meal or use; keep free of food scraps and debris
- iv. Clean all washing areas and appliances, including cooking and eating utensils, after each meal or use
- v. Clean tables and chairs (top and underside) after each meal or use; disinfect after cleaning
- vi. Keep floors clean, free of food scraps, debris and any signs of bio-contamination; clean at least once daily
- vii. Ensure floor drains are operating properly and odor-free; flush clogged drains with hot water to remove clog
- viii. Trash receptacles are to be tightly covered and emptied at least once daily (or when full); do not allow trash to overflow
- ix. Inspect all food preparation and eating areas for evidence of insects, rodents, or bio-contamination (such as mold)

**g. Prohibited Practices**

Do not mix any products especially products that contain chlorine (or chlorinated compounds) with those that contain ammonia.

**h. Cleaning Frequency Schedule and Checklist**

Checklists, and/or schedules such as the one shown in Section F and VII, shall be used in training cleaning staff and as a task checklist on cleaning carts.

**i. Disposal Requirements**

- x. *Excess product*
  1. Use all cleaning products until containers are completely empty.
  2. Use products with expiration dates prior to expiration.
  3. Dispose of all excess product in accordance with manufacturer and MSDS instructions.
  4. Empty contaminated cleaning solution and water in janitorial sinks.

*xi. Packaging*

1. Recyclable packaging includes, at a minimum, white office paper, mixed paper, press board, corrugated cardboard, plastics #1 (PET) and #2 (HDPE), metal, and glass
2. Recycle all packaging in designated recycling area (See attachment 12, SERT)

## **B. Grounds Care Requirements**

The HHPC objectives for maintaining grounds are to remove hazards (such as broken glass and other trash), prevent outside pollutants from entering the school, minimize the amount of pollutants released into the air and grounds, and minimize the noise.

### **1. Reducing Chemical Use**

An integrated pest management policy (MCPS ECF-RA) promotes the use of alternatives to chemical pesticides; when non-chemical methods are not available or prove ineffective, use nontoxic or least toxic pesticide options. The DSPO performs school inspections and notifications issued to ensure that staff and school related organizations (i.e. PTA) act in accordance with these regulations.

- a. Eliminate the use of herbicides (weeds may be removed by hand)
- b. Snow removal and deicing
  - i. Snow shall be removed by physical means; do not use deicing chemicals to remove snow; remove snow using equipment such as plows, shovels, or snow-blowers
  - ii. Do not over-apply de-icers; remove ice physically when possible and apply only the amount of product that is needed to melt ice
  - iii. Avoid the use of chloride salts for de-icing (harmful to vegetation, corrode steel, and can cause scaling, cracking, and spalling in concrete) in favor of vegetable-based, agricultural byproduct de-icers

### **2. Reduction of Airborne Particulates and Fumes**

- a. Do not use a blower to remove normal to average accumulation of dust and debris near building entrances. Instead, sweep or hose down.
- b. Do not use a mechanical mower on areas where ground cover is shorter than 1 inch or where dirt is exposed
- c. Use battery powered equipment
- d. Grounds waste should be left in designated areas for pick up

## **C. Product Standards**

### **1. Referenced Standards**

- a. All cleaning products must meet the requirements in at least one of the following third-party standards:
  - i. Green Seal standards for "Industrial & Institutional Cleaners" (GS-37)
  - ii. Green Seal standards for "Tissue Paper" (GS-01)
  - iii. Green Seal standards for "Paper Towels and Paper Napkins" (GS-09)
  - iv. Green Seal standards for "Cleaning/Degreasing Agents" (GS-34)
  - v. Environmental Choice Program's *EcoLogo* for Cleaning and Janitorial Products
  - vi. Greenguard Environmental Institute standards for GREENGUARD Indoor Air Quality Certified® Products
- b. Give preference to products that meet the requirements in at least one of the following third-party standards:
  - i. Green Seal standards for "Tissue Paper" (GS-01)

- ii. Green Seal standards for "Paper Towels and Paper Napkins" (GS-09)
- iii. EPA Comprehensive Procurement Guidelines
- c. Give preference to cleaning products that have been recognized by the U.S. EPA Design for the Environment Program and carry the DfE label.
- d. Consider "green housekeeping" certification from Green Seal through its "Green Facilities Operation and Maintenance Criteria" (GS-39)
- e. All exterior pest management products must meet the requirements of MCPS Policy ECF-RB, "Integrated Pest Management Program"
- f. All products must be listed on Hazardous Chemical Inventory lists that are updated annually and accompanied by current MSDS for compliance with federal, state, and local safety regulations. In addition, training of staff on how to safely use and store the product is required prior to use.

## 2. **List of Prohibited Cleaning Chemicals**

The chemicals found in cleaning products include toxins, such as known human carcinogens, narcotics, neurotoxins, teratogens, and mutagens. The EPA has catalogued complaints directly associated with cleaning product, the most common of which include: eye and respiratory irritation, headaches and chronic fatigue, dizziness and heart irregularities, impaired judgment and coordination, irritability and mood swings, nausea, and joint and muscle pain. Many of these chemicals are unnecessary additives.

- a. All cleaning products will be free from the following chemicals.
  - i. Alkyl phenol ethoxylates – *class of detergents linked to endocrine disruption and with high aquatic toxicity*
  - ii. Benzene – *volatile organic compound used as a solvent and a known carcinogen*
  - iii. Optical brighteners
  - iv. Ozone-depleting compounds (ODCs) – *see Section E, Definitions*
  - v. Phthalates and dibutyl phthalate – *family of chemicals frequently used as a plasticizer; probable carcinogen and known to cause chronic health effects including liver and kidney abnormalities*
  - vi. Heavy metals, including arsenic, lead, cadmium, cobalt, chromium, mercury – *heavy metals bio-accumulate in the environment and in people, and linked to many health issues, including neurological disorders, kidney problems, high blood pressure, birth defects, and genetic mutation*
- b. All cleaning products will be free from chemicals listed in the 11th Report on Carcinogens published by the National Toxicology Program
- c. Minimize the use of the following cleaning chemicals or products containing them:
  - i. Ammonia and quaternary ammonium compounds – *effective disinfectant and stain remover that is linked to asthma and skin sensitization*
  - ii. Chlorine and chlorinated compounds, including bleach – *a disinfectant, not a cleaner, that is highly corrosive, is a severe eye and respiratory system irritant that is often contaminated with mercury (a potent neurotoxin)*
  - iii. Phosphates – *over nutrify waterways and can cause algae blooms*
  - iv. Monoethanolamine – *typically used as a medical disinfectant and linked to asthma*
  - v. Chlorhexidine – *typically used as a medical disinfectant and linked to asthma*
  - vi. Chloramine – *typically used as a medical disinfectant and linked to asthma*
  - vii. Zinc and zinc compounds – *soluble forms are toxic to aquatic life*

### 3. **Additional Product Selection Criteria**

- a. All products must be clearly labeled and prominently state dilution recommendations in accordance with federal and state safety regulations
  - b. Avoid aerosol products
  - c. Undiluted products must not contain ingredients that are toxic to humans (meet exposure limits set by NIOSH or OSHA)
  - d. Undiluted products must not be corrosive to the skin or eyes
  - e. Products must eliminate fragrances or show that any fragrances meet the Code of Practice of the International Fragrance Association
  - f. Products must not be combustible (flashpoint above 150°F)
  - g. Ingredients must not pollute waterways (directly or indirectly)
    - i. Ingredients must not contain total phosphorous (including compounds) that exceeds .5% by weight
    - ii. Ingredients must not be toxic to aquatic life
    - iii. Ingredients must exhibit ready biodegradability (removal of DOC by >70% or BOD by >60% according to ISO testing methods 9439, 10718, 10808, or 7827)
  - h. Give preference to products with recyclable primary packaging
  - i. Give preference to packaging made with post-consumer recycle content
- Additional application-specific criteria are included in “*Product Recommendations*” below.

### 4. **Product Documentation Requirements**

At least one of the following shall be on file to demonstrate that products meet or exceed the standards listed above:

Proof the products have been Green Seal certified

- a. Signed statement by a senior company official (vice president or higher) for the product manufacturer stating that the product will be certified by Green Seal within 90 days
- b. Certification by an independent third-party stating that the products have been tested in accordance with the Green seal standards and that the products meet or exceed those standards. Such certification must include a review of all test data required for a product to be certified by Green Seal

## **D. Product Recommendations**

Following are product *recommendations* for each cleaning application that meet the policies and standards defined above. The product recommendations included in this plan provide examples of acceptable cleaning products; however, substitute products may be used, provided they meet the criteria set forth in this plan. Prior to purchase and use, all products will be evaluated and approved by MCPS Environmental Services/Indoor Environmental Team and/or the System-Wide Safety Program director. Product manufacturer will provide training in product appropriateness for each designated application, recommended dilution for all concentrate products and safety training. Product labels and instructions will be clear and visible for cleaning staff. Additional product requirements for specific applications are included below.

#### 1. **General Janitorial:**

**Alpha-HP Multi-Surface Cleaner (US EPA registered #70627-54)** will be used for disinfecting, cleaning, and deodorizing all areas including restrooms. It cleans glass, countertops, sinks, stainless steel, and chrome. When mixed with water at different dilution rates it is used as an all purpose surface cleaner for walls, student desks,

light fixtures, window sills and door frames. Cleaner can also be used with warm water to scrub tile floors. It should be used with cold water to maintain floors. In addition, an approved hospital grade disinfectant will be used daily for MRSA and bloodborne pathogen reduction.

## 2. **Floor Care:**

- a. Alpha-HP Multi-Surface Cleaner- used to wet mop floors and can be used in scrub machine.
- b. Snapback Spray Buff- used with high speed buffing machines to restore and maintain the shine on tile floors.
- c. Maintainer Plus - Formulated for daily use and doesn't require burnishing after each application. Use through an auto scrubber or with mop and bucket.
- d. Carefree Floor Finish- used to seal tile floors after scrubbing or stripping procedure.
- e. Contender Gym Finish- used to seal wood floors after screening and tacking procedure.
- f. Tacking Solution- used for tacking wood floors after screening procedure.
- g. Bravo- stripper mixed with water to strip tile floors with wax build-up present.
- h. Vinegar- used with cold water to mop floors. Also can be used as a defoamer in carpet extractor machines.
- i. Carpet Care Supplies: Alpha-HP will be used in carpet extractor machines and to spot clean carpets.
- j. Gum Remover
- k. Virex II 256 disinfectant will be used for MRSA and bloodborne pathogen prevention.

## 3. **Kitchen sanitizing:** The current products are used for sanitizing food service kitchens.

- a. Pink Suds - Lotionized pink liquid detergent for pots, pans and other utensils (Cavalier Chemical Co.)
- b. Emerald Green – super concentrated all purpose liquid cleaner (Cavalier Chemical Co.)
- c. Oven Cleaner & Degreaser (Cavalier Chemical Co.)
- d. Chlorine Bleach solution (1:10 water to bleach ratio) for sanitizing
- e. Scale and Film Remover for removing lime scale deposits (Sanolite Corp.)
- f. Germicidal Rinse/Sanitizer - for yogurt & smoothie machines (Sanolite Corp.)
- g. Jester NF - Heavy duty liquid detergent for cleaning automatic hood systems (Sanolite Corp.)

## 4. **Restrooms:** (includes sinks, showers, floors, drains, waterless urinals, restocking, etc.) See also "General Janitorial" products listed above.

- a. General Cleaning – Johnson Alpha HP
- b. Disinfectants – disinfectants are not to be used in place of cleaning products; may not have VOCs that exceed 1% by weight of undiluted product and must be registered by the US EPA. **Alpha-HP Multi-Surface Cleaner (US EPA registered #70627-54), Johnson Virex II 256**
- c. Hand Soaps – give preference to products that do not contain anti-microbial ingredients, such as triclosan and should have a pH between 6 and 8.5

**5. Kitchenettes, Food Service and Eating Areas**

See also "General Janitorial" and "Restroom" products listed above.

Dishwashing detergents – give preference to products that do not contain anti-microbial ingredients, such as triclosan

**6. Paper Products**

- a. Paper supplies for cleaning shall not be used. Reusable micro fiber cloths shall be used for cleaning
- b. Paper supplies for restrooms: Toilet tissue shall contain a minimum of 35% recycled fibers. Paper towels shall contain 100% recycled fibers.

**7. Grounds Maintenance**

De-icers – MCPS uses a sand/salt mixture provided by the Montgomery County Government

**E. Mechanical Systems Operational Requirements**

Regularly scheduled preventative maintenance on HVAC systems will be documented to ensure healthy, indoor air quality, climate control and longevity of equipment. Building Maintenance Plans will be in place to document preventative maintenance routines, indoor air quality assessments, schedules of required tasks, i.e. filter changes, lubrication and calibration, service records on ventilation systems, proper operating values, and log sheets.

## **F. Staff Training**

The DSPO training unit will provide training to all cleaning staff for all methods and products described within this plan. A Safety Manual is available on site and is accessible to all staff members. The director of Systemwide Safety Programs unit will provide guidance and direction on product questions and emergency contact for hazardous event (such as a spill), MSDS for all products, and step-by-step instructions for proper use of each product (including use, dilution, and disposal). If cleaning staff is non-English speaking, consider using training that is in multi-lingual format and/or provide dilution instructions in pictorial format. Training for proper use of specific products should be provided through the product manufacturer or distributor if offered and include directions on the product MSDS, use and personal protective equipment to be used. Training must include, at a minimum:

1. General orientation
2. Review of this plan, including intent, procedures, and products; incorporate into semi-annual staff training
3. On-site supervised training
  - a. General cleaning practices and techniques
  - b. Use and care of housekeeping equipment and supplies
  - c. Housekeeping chemicals
4. Review of safety regulations, policies and guidelines and where chemicals are stored in accordance with OSHA/MOSH Hazard Communication standards prior to use
5. Review of universal warning symbols pertaining to hazardous substances and waste including directions listed on MSDS for each product
6. Instruction on how to read a material safety data sheet (MSDS)

Where applicable, procurement training will be provided for responsible parties. Procurement training will include, at a minimum, review of the requirements in this plan and all referenced standards. Checklists will be provided and posted on site for cleaning staff that describe procedural requirements in accordance with this plan.

## **Section IV – Resources**

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### **A. Additional Information:**

1. Agency for Toxic Substances and Disease Registry, <http://atsdr.cdc.gov>
2. Center For Disease Control and Prevention, [www.cdc.gov](http://www.cdc.gov)
3. Center for Health, Environment and Justice, [www.chej.org](http://www.chej.org)
4. Environmental Protection Agency (EPA), [www.epa.gov](http://www.epa.gov)
5. European Eco-Label Catalogue, [www.eco-label.com](http://www.eco-label.com)
6. Green Seal, *Choose Green Reports*, [www.green Seal.org](http://www.green Seal.org)
7. Healthy Schools Network, *Guide to Healthier Cleaning & Maintenance Practices and Products*, [www.healthyschools.org](http://www.healthyschools.org)
8. Inform, *cleaning for Health: Products and Practices for a Safer Indoor Environment*, [www.informinc.org](http://www.informinc.org)
9. Institute for Health and Environment, [www.albany.edu/ihe](http://www.albany.edu/ihe)
10. National Institute of Environmental Health Sciences (NIEHS), [www.niehs.nih.gov](http://www.niehs.nih.gov)

11. Natural Resources Defense Council (NRDC), [www.nrdc.org](http://www.nrdc.org)
12. New American Dream, *List of Approved Cleaning Products*, [www.newdream.org](http://www.newdream.org)
13. Ninth Report on Carcinogens, U.S. Department of Health and Human Services, <http://ehis.niehs.nih.gov/roc/toc9.html>
14. US Green Building Council, [www.usgbc.org](http://www.usgbc.org)
15. Occupational Safety and Health Administration (OSHA) AND Maryland OSHA

**B. Product Manufacturers:**

Betco, "Green" Products, [www.betco.com](http://www.betco.com)

1. The Clean Environment Company, [www.cleanenvironmentco.com](http://www.cleanenvironmentco.com) Cleanline Products, [www.cleanlineproducts.com](http://www.cleanlineproducts.com)
2. Cogent Environmental Solutions, [www.ecogent.ca](http://www.ecogent.ca)
3. CPC Aeroscience, *SOYLution*, [www.cpcaserosols.com/soylution/](http://www.cpcaserosols.com/soylution/)
4. EcoLab, [www.ecolab.com](http://www.ecolab.com)
5. Eco-Products, [www.ecoproducts.com](http://www.ecoproducts.com)
6. Enviro-Solutions, [www.enviro-solution.com](http://www.enviro-solution.com)
7. EnvirOx, [www.h2orange2.com](http://www.h2orange2.com)
8. Interstate Products, Inc., *Natural Cleaners*, [www.interstateproducts.com/natural.htm](http://www.interstateproducts.com/natural.htm)
9. Healthy Green Buildings, *Environmental Guardian*, Commercial Cleaning Products, [www.cleaningpro.com/products/commercial/commercial.htm](http://www.cleaningpro.com/products/commercial/commercial.htm)
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13. Penford Products., [www.penfordproducts.com](http://www.penfordproducts.com)
14. Glacial Technologies, [www.anti-icers.com](http://www.anti-icers.com)
15. Seneca Mineral, [www.senecamineral.com](http://www.senecamineral.com)
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## Section V – Definitions

<b>A</b>	<b>Antimicrobial</b>	An agent that destroys or inhibits the growth of micro-organisms, such as bacteria and fungi
	<b>ASTM</b>	American Society for Testing and Materials
<b>B</b>	<b>Bathroom Cleaners</b>	A category of products used to clean hard surfaces in a bathroom, such as counters, walls, floors, fixtures, basins, tubs, and tile. It includes products that are required to be registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), such as disinfectants and sanitizers, but does not include products specifically intended to clean toilet bowls.
	<b>Bio-Accumulation</b>	The tendency of a substance to concentrate in the tissues of organisms over time.
	<b>Biodegradable</b>	material that can be broken down by microorganisms into simpler, more stable compounds
	<b>BOD</b>	Biological oxygen demand

	<b>Building-Related Illness</b>	Illness whose cause and symptoms can be diagnosed and attributed to a specific pollutant source within a building
<b>C</b>	<b>Carcinogen</b>	A chemical listed as a known, probable, or possible human carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), the U.S. Environmental Protection Agency, or the Occupational Health and Safety Administration.
	<b>CPSC</b>	Consumer Product Safety Commission
	<b>Concentrate</b>	A product that must be diluted by at least eight parts by volume water prior to its intended use.
	<b>Contaminant</b>	A substance (physical, biological, chemical or radiological) that has an adverse effect on soil, air and/or water
	<b>Corrosive</b>	A substance that causes visible destruction of or irreversible alterations in, living tissue by chemical action at the site of contact.
<b>D</b>	<b>Dispensing System Concentrate</b>	Products designed to be used in dispensing systems that cannot be practically accessed by users.
	<b>Disinfectant</b>	Products used on hard surfaces to destroy or irreversibly inactivate all forms of microbial life, but not necessarily their spores. Not all disinfectants destroy all types of microbes.
	<b>DOC</b>	Dissolved organic carbon
<b>F</b>	<b>FIFRA</b>	Federal Insecticide, Fungicide, and Rodenticide Act
	<b>Fungus</b>	A group of organisms such as mildew, mold, yeast and mushrooms that lack chlorophyll.
<b>G</b>	<b>Glass Cleaners</b>	A category of products used to clean windows, glass, and polished surfaces.
	<b>General Purpose Cleaners</b>	Products used for routine cleaning of hard surfaces including impervious flooring such as concrete or tile.
<b>H</b>	<b>HSDB</b>	Hazardous Substance Data Bank
<b>I</b>	<b>IAQ (Indoor Air Quality)</b>	Considered to be acceptable when no known air-borne contaminants exist at concentrations that may be harmful or cause irritation.
	<b>Ingredient</b>	Any constituent of a product, whether intentionally added or not, that comprises at least 0.01% by weight of the product.
	<b>ISO</b>	International Organization for Standardization
	<b>IARC (International Agency for Research on Cancer)</b>	An arm of the World Health Organization that studies association between substances and cancer.
<b>M</b>	<b>Microbial Growth</b>	Multiplication of microorganisms such as fungi and bacteria
	<b>Mutagen</b>	A substance that has been linked to increased rates of genetic mutation (above the average rate).
<b>N</b>	<b>Neurotoxin</b>	A substance with toxic effects on any portion of the central or peripheral nervous system.
	<b>NIOSH (National Institute for Occupational Safety and Health)</b>	Part of the U.S. Department of Health and Human Services that conducts research and makes recommendations on health and safety standards, including setting short- and long-term exposure limits for many chemicals.
<b>O</b>	<b>Off-Gassing</b>	The vaporization of chemical compounds into surrounding air.
	<b>Optical Brighteners</b>	Additives designed to enhance the appearance of colors and whiteness in materials by absorbing ultraviolet radiation and emitting blue radiation. Also known as fluorescent whitening agents.
	<b>OSHA</b>	Occupational Safety and Health Administration

	<b>Ozone Depleting Compound (ODC)</b>	Any compound with the potential to deplete stratospheric ozone.
	<b>Ozone Depleting Potential (ODP)</b>	A relative measure of the ability of a substance to break down the stratospheric ozone layer.
<b>P</b>	<b>Post-Consumer</b>	Waste material that has served an intended use.
	<b>Post-Industrial</b>	Waste material from manufacturing processes.
	<b>Ppm</b>	Parts per million
	<b>Primary Packaging</b>	The material physically containing and coming into contact with the product, not including the cap or lid of a bottle.
	<b>Product as Used</b>	The most concentrated form of the product that the manufacturer recommends for an intended use.
<b>R</b>	<b>Recyclable Packaging</b>	Any packaging that can be diverted from the waste stream through available processes and programs, and can be collected, processed, and returned to use in the form of raw materials or products.
	<b>Reproductive Toxin</b>	A chemical which may cause birth defects or sterility.
	<b>RTECS</b>	Registry of Toxic Effects of Chemical Substances
<b>S</b>	<b>Sanitizer</b>	Products that reduce, but do not necessarily eliminate, micro-organisms to level that are considered safe
	<b>Sick Building Syndrome</b>	a phenomenon in which building occupants experience a variety of health and/or comfort effects linked to time spent in a particular building, but where no specific illness or causative agent can be identified. Symptoms in sufferers often include headaches, eye irritation, and respiratory irritation.
	<b>Sterilizer</b>	Products used to destroy or eliminate all forms of microbial life, including spores. Primarily used in healthcare settings.
<b>T</b>	<b>Terratogen</b>	A substance that has been directly linked to birth defects during human fetus development.
	<b>Toxicity</b>	The degree to which a material causes or threatens to cause adverse health effects to living organisms at a given concentration. Expressed in exposure limits.
	<b>TVOC</b>	Total Volatile Organic Compounds; see VOC (Volatile Organic Compound)
<b>U</b>	<b>Undiluted Product</b>	The most concentrated form of a product produced by a manufacturer for transport outside its facility
<b>V</b>	<b>VOC (Volatile Organic Compound)</b>	Chemical compounds that contain carbon and that partially vaporize at normal room temperature. VOCs are a group of chemicals that have varying degrees of toxicity and effects.

**Section VI – Cleaning Checklist**

	Y e s	N o
<b>GENERAL</b>		
1. Clean all door and window glass with window cleaner and microfiber cloth		
2. Clean all doors with general cleaning solution; clean from top to bottom		
3. Spot clean any graffiti on walls, floors, and desks; remove tape and chewing gum with the straight edge of a putty knife		
4. Post wet floor signs in cleaning area; remove only when floors are completely dry		
<b>GROUNDS CARE</b>		
1. Perform the following each day before students arrive: remove all graffiti (photograph and report to principal any gang-related graffiti); check that playground equipment does not have missing or loose parts; spread ground		

cover of outside play areas evenly; pick up trash and debris, including glass and sharp objects, from entire grounds and parking lots; empty all outside trashcans; remove any water puddles		
2. Mow lawns weekly, trimming around buildings, walks, and fence lines		
3. Rake grounds and remove leaves as required, being sure to keep doorways and entrances clear of leaves		
4. Clean storm drain grating weekly, or when backup occurs		
5. Inspect gutters and downspouts weekly or when observed to be stopped-up		
6. Clean roof drains monthly or when observed to be stopped-up		
7. Keep sidewalks and entrances free of ice and snow		
8. See also "ENTRYWAYS" below		
<b>ENTRYWAYS – DAILY</b>		
1. Clean exterior sidewalk and vestibule with high quality push broom or water hose		
2. Vacuum entryway mat in both directions (2 passes, minimum)		
3. Clean walls, doors, handles, push plates, and kick-plates inside and outside		
4. Empty all waste receptacles & recycling; clean outside of trash can and change liner if dirty		
<b>ENTRYWAYS – WEEKLY</b>		
1. Roll up and remove entryway mats inside and outside		
2. Sweep and then damp mop underneath interior entryway mat area; allow to dry completely prior to replacing entryway mat		
3. Sweep or pressure wash underneath exterior entryway mat; allow to dry completely prior to replacing entryway mat		
<b>DUSTING – DAILY</b>		
1. Use micro-fiber or damp lint-free cloth		
2. Dust from top to bottom		
3. Dust walls, desk tops, sills, ledges, shelves, bookshelves, blinds, furniture, and exit signs; damp wipe walls, woodwork, baseboards, trim, and window sills weekly		
4. Vacuum and damp wipe chalk trays, moving chalk and erasers to cleaned area		
<b>DUST MOPPING/VACUUMING – DAILY</b>		
1. Start from far corner and work towards the door		
2. Use continuous motion without lifting the mop/vacuum from the floor		
3. Turn and pivot mop head/vacuum and overlap previous path by 2 to 4 inches		
4. Pick up all debris with brush and dust pan; remove chewing gum with a putty knife		
5. Replace vacuum bags when $\frac{3}{4}$ full		
6. Spot clean carpet and floor areas		
7. Vacuum chalk board trays, vents, grates, crevices, and ceiling diffusers		
<b>MOPPING/VACUUMING – WEEKLY</b>		
1. Vacuum all fabric covered furnishings weekly		
2. spray buff hard floors to restore finish and dust mop after buffing		
<b>CARPET CARE – CLEANING</b>		
1. Apply spot treatment, as required		
2. Check for wet areas on carpet; blot and dry with wet-vac		
3. For chronic wet areas on carpet, remove water source, inspect carpet for mold, replace any carpet with signs of mold or mildew (visual or smell), if water source cannot be eliminated, remove carpet and replace with non-absorbent flooring surface		
4. See above for additional requirements		
<b>CARPET CARE – PRE-SPRAY/EXTRACTION</b>		
1. Apply spot treatment, as required		
2. Apply pre-spray to carpet and allow to sit 10-15 minutes		
3. Extract & rinse carpet with warm water on first pass		
4. Dry-extract on second pass		

5. Empty recovery tank when full (and refill rinse tank with warm water as required)		
<b>FLOOR CARE – BUFFING</b>		
1. Damp mop floor		
2. Apply spray buff in a stream or coarse spray (do not over-wet)		
3. Make 3 passes with a 175 rpm buffing machine (fitted with buffing pad) in a swinging motion across work area		
4. Change pads as necessary		
5. Mop floor with micro-fiber mop after entire area has been buffed		
<b>FLOOR CARE – BURNISHING</b>		
1. Damp mop floor		
2. Make one pass over the work area with burnisher		
3. Repeat second pass if desired gloss is not achieved		
4. Change pads as necessary		
5. Mop floor with micro-fiber mop after entire area has been buffed		
<b>FLOOR CARE – STRIPPING (to be performed upon request only)</b>		
1. Remove all gum and stuck-on debris with putty knife		
2. Damp mop floor		
3. Use edging tool along baseboards and corners		
4. Do not allow stripper to travel under doors or onto carpet areas		
5. Allow solution to sit per product manufacturer instructions, then scrub floor with rotary scrubber, changing direction by 90 degrees to improve agitation and removal		
6. Check floor for finish removal (no sticky areas)		
7. Remove slurry with clean mop; control slurry with squeegee		
8. Rinse floor thoroughly with clean cold water		
9. Re-check for residue by rubbing hand over dry surface		
<b>FLOOR CARE – FINISH &amp; SEALER APPLICATION</b>		
1. Pour enough finisher or sealer into lined bucket to cover work area (do not over-fill)		
2. Dip mop into finisher or sealer, and press out excess liquid		
3. Apply finish or sealer by framing out a 10' x 10' area, and then filling using an overlapping figure-8 motion		
4. Second coat may be applied, if desired, once first application is completely dry		
5. Discard bucket liner and left-over finisher/sealer per manufacturer disposal instructions		
6. Thoroughly clean mop head, bucket, and wringer		

<b>RESTROOMS</b>		
1. Damp mop floor (to remove debris)		
2. Apply product to interior of toilets and urinals		
3. Apply product to exterior of toilets and urinals using stream or course spray setting		
4. Apply products to sinks and countertops		
5. Fill dispensers and empty trash		
6. Clean mirrors		
7. Clean and wipe dispensers		
8. Wipe sinks and countertops with micro-fiber cloths		
9. Clean interior of toilets and urinals		
10. Clean exterior of toilets and urinals		
11. Clean switches, handles, door knobs, push plates		
12. Spot clean walls and toilet partitions		
13. Remove soap from shower floors, and clean all surfaces, including walls and fixtures; scrub shower floors with scrub brush and cleaning solution		
14. Mop the floor, removing all standing water		
15. Pour hot water germicidal solution into drain if clogged or odorous		
16. Apply disinfectant after cleaning all areas and rinse as directed		
<b>RECYCLING MATERIALS – COLLECTION AND REMOVAL</b>		
1. Empty all designated containers used in collection of recycled paper and commingled materials; keep materials separated		
2. Transport to outdoor collection containers and deposit into appropriate container		
3. Return all emptied containers to original location		
4. Damp wipe inside and outside of soiled or odorous recycling containers		
5. Break-down and deposit corrugated cardboard designated for recycling and deposit in appropriately labeled outdoor container		

## SECTION VII - ATTACHMENTS