

Pleasant Valley Community School District

GREEN CLEANING PROGRAM

Introduction:

The intent of the Green Cleaning Program is to meet Pleasant Valley Community School District [PVCSD] requirements while reducing the exposure of your personnel and building occupants to potentially hazardous products, equipment or procedures which could adversely affect human health and the environment, indoors and outdoors.

The program is designed to meet the varied requirements of PVCSD. The program was developed to assist PVCSD pursuing LEED-EB certification and to create a more sustainable environment. We have incorporated criteria and practices from USGBC LEED-EB O&M 2009 Version 3, from Green Seal GS 42 standard for cleaning services, IFMA Foundation "The Business of Green Cleaning" and from the "Pennsylvania Green Building Maintenance Manual" to develop the PVCSD Green Cleaning Program.

Components of the program:

- ❖ Chemicals and dispensers
- ❖ Powered maintenance equipment
- ❖ Miscellaneous supplies
- ❖ Procedures
- ❖ Training
- ❖ Communications
- ❖ Staffing
- ❖ Monitoring results
- ❖ Glossary of terms
- ❖ Examination for company/facility certification

Chemicals:

This section will outline PVCSD criteria for choosing sustainable chemicals and a list of chemicals to be used in the program. Green Seal GS 37 cleaners, GS 40 floor finishes/strippers, GS 41 hand soaps standards will be followed.

The following are typical criteria for environmentally preferable cleaning chemicals:

- | | |
|---------------------------|-----------------------------------|
| - Low VOC | - Low toxicity |
| - More moderate pH (4-11) | - Concentrates & dilution control |
| - Low odor | - Readily biodegradable |
| - Work in cold water | - No carcinogens |

- Multiple use products
- Products derived from renewable resources
- Products in recyclable packaging
- No heavy metal floor finishes

Approved Chemicals:

1. 53647-00 Green Earth Daily Floor Cleaner
2. 53547-00 Green Earth Glass Cleaner
3. 33647-00 Green Earth Peroxide Cleaner
4. 34047-00 Quat Stat SC Disinfectant
5. 07612-00 Stix Porcelain Cleaner
6. 20918 Citrusolve Concentrate
7. 13347-00 Push Enzyme Digestant
8. 78404-00 Green Earth Foaming Skin Cleanser
9. GEN113 Linpol Green Bio Based Cleaner
10. GEN64 Delta Mild Cleaner
11. GEN69 Enzysan Biological Restroom Cleaner
12. 69505-00 GT Gym Floor Cleaner

Dilution control system:

The Green Cleaning Program will utilize the Betco FastDraw Chemical Management System for dispensing chemical products. The system is comprised of multiple dispensing options to allow our program the greatest flexibility, economy and effectiveness.

Equipment:

The equipment utilized in our program will reduce building and the environmental impact while continuing to deliver economical and effective results. This section will outline the criteria for selecting environmentally preferable equipment.

We are using the requirements outlined in LEED-EB O&M Version 3, Indoor Environmental Quality Credit 3.4 to manage the powered cleaning equipment used in our program.

Criteria:

- ❖ **Vacuum cleaners (backpack or up-right)** – CRI certified or HEPA filtration; sound level of less than 70 dBA
- ❖ **Carpet extractors** – CRI certified or capable of producing maximum 24 hr. drying times
- ❖ **Floor machines and burnishers** – vacuums to capture fine soil particles; sound level of less than 70dBA
- ❖ **Propane floor equipment** – high-efficiency, low emission engines; sound level of less than 90 dBA
- ❖ **Automatic scrubbers** – variable speed pumps to optimize the use of cleaning fluids

- ❖ **Battery powered equipment** - equipped with environmentally preferable gel batteries.
- ❖ **Equipment is ergonomically designed** to minimize vibration, noise, user fatigue and contain safeguards, such as rollers or rubber bumpers, to reduce potential damage to building surfaces.

Another area to insure a sustainable cleaning program is the continual **maintenance of janitorial equipment**. Our program will maintain purchasing records and maintenance logs for each piece of equipment in the facility to assist **PVCSD** pursuing a LEED-EB certification or to green their operations.

Items to include in the maintenance log:

- Location of facility
- Date purchased or introduced to the facility
- Routine maintenance dates
- Record of repairs
- Additional user training needed

Supplies:

Disposable Paper and Plastic Bags:

Another ingredient of a successful green cleaning program is the consistent use of environmentally preferable disposable paper and trash bags. The **PVCSD** will utilize products containing the criteria outlined in the EPA Comprehensive Procurement Guidelines (CPG), Green Seal GS 01, GS 09 standards, Ecologo CCD 82, CCD 86 standards, LEED-EB Version 3 Indoor Environmental Quality Credit 3.3 or criteria listed below.

Criteria:

- Bathroom tissues-minimum 100% recovered material and 20% post-consumer content.
- Toilet seat covers-minimum 100% recovered materials and 20% post-consumer content.
- Paper towels and general-purpose industrial wipes-minimum 100% recovered materials and 40% post-consumer content.
- Plastic trash bags-minimum of 25% post-consumer content.
- No use of de-inking solvents containing chlorine or any other chemicals listed in the Toxic Release Inventory in the manufacture of paper products.
- No use of chlorine or chlorine derivatives in bleaching processes for paper products.

Microfiber cloths and mops:

The use of micro fiber cloths, mops is another method to lessen the impact on health and the environment. The following products will be used in our program:

- Microfiber Dust Cloths
- Microfiber Dust Mops
- Microfiber Mopping System

Procedures: We will incorporate environmental preferable procedures noted in the “Pennsylvania Green Cleaning Manual”, Green Seal GS 42 standard and IFMA “The Greening of Your Business” manual with current procedures.

Green Maintenance Procedures

In general, green maintenance procedures are similar to traditional procedures. The differences are more a matter of focus than one of technique. The focus of this section is on pollution prevention strategies and some specific opportunities to modify traditional procedures to reduce impacts on health and the environment.

People with Special Needs:

- ✓ Identify those building occupants and employees with individual needs and sensitivities.
- ✓ Develop a plan to address the individual needs of people with sensitivities.
- ✓ Change the products and/or cleaning schedules as necessary to accommodate their individual needs.
- ✓ Address ventilation requirements to help mitigate any problems.

Dusting:**Preparation and Safety:**

- ✓ Gather appropriate materials, read MSDS sheets.

Chemicals, equipment, supplies:

1. Microfiber dust cloths
2. Microfiber dusting tools

Procedures:

- ✓ High dust first.

- ✓ Use a folded microfiber cloth and refold as the cloth becomes dirty.

Clean up:

- ✓ Clean and restore materials used.
- ✓ Report any problems encountered.

Dust Mopping:

Preparation and Safety:

- ✓ Gather supplies and Personal Protective Equipment (PPE)
- ✓ Read MSDS and label instructions
- ✓ Remove obstacles
- ✓ Position caution signs

Chemicals, equipment, supplies:

1. Microfiber dust mops

Procedures:

- ✓ Vacuum matting
- ✓ Remove large debris, mats or anything stuck to floor
- ✓ Use the largest micro fiber dust mops with swivel action based on the size of the area and the physical abilities of the custodial worker or use wide area vacuums fitted with appropriate bags/filters versus dust mops
- ✓ Dust mop edges first at an angle away from the wall
- ✓ Shake out dust mop as needed, or replace mop head and pick up dirt, dust, debris and dispose of properly.

Clean up:

- ✓ Brush off dust mop or change mop head and hang up mop
- ✓ Remove caution signs
- ✓ Note any problems

Entryways:

Preparation and Safety:

- ✓ Gather supplies and PPE
- ✓ Read MSDS and label instructions
- ✓ Remove obstacles
- ✓ Position caution signs

Chemicals, equipment, supplies:

1. Microfiber dust mops
2. Microfiber flat mopping system
3. Hepa vacuum

Procedures:

- ✓ Dust from top to bottom with a microfiber cloth

- ✓ Spot clean surfaces
- ✓ Vacuum matting, dust mop lobby with microfiber mop
- ✓ Collect and empty trash containers
- ✓ Wet mop entry and lobby area

Clean up:

- ✓ Clean and restore all supplies
- ✓ Remove caution signs
- ✓ Note any problems

Floor Care:

Preparation and Safety:

- ✓ Gather supplies and PPE
- ✓ Read MSDS and label instructions
- ✓ Remove obstacles
- ✓ Post caution signs

Chemicals, equipment, supplies:

1. Microfiber dust mops
2. Green Earth Daily floor cleaner

Procedures:

Floor Care – Routine Maintenance:

- ✓ Thoroughly vacuum all floor matting to remove soils. Remove the matting so the floor can be cleaned.
- ✓ A long handle scraper or putty knife should be used to remove stickers, gum and other debris adhered to the floor surface.
- ✓ Using a clean dry microfiber dust mop, carefully sweep the entire floor surface removing soils. Dispose of the soils properly.
- ✓ Fill the automatic scrubber with cool water and the selected **floor cleaner** per label directions.
- ✓ Attach the red scrub pad to the scrubber and be sure wet floors signs are properly placed.
- ✓ With the squeegee down, vacuum motor on and brushes engaged, scrub the entire floor area.
- ✓ Once the floor is dry it is ready to be burnished if desired.
- ✓ If the area is smaller or an auto scrubber is not available use a mop and bucket, a standard floor machine and wet/dry vacuum. Mop on the cleaning solution, allow it to dwell for 5 minutes, scrub with the floor machine and attached red scrub pad and then pick up the liquid with a wet/dry vac.

The use of a Restorer:

- ✓ Prepare the area the same as when cleaning the floor. Vacuum and remove matting, loosen soils with scraper and dust mop. Always place caution signs before applying the restorer.

- ✓ Fill the automatic scrubber solution tank with cool water and restorer per label directions.
- ✓ Attach the red scrub pad to the automatic scrubber. Scrub the entire floor area.
- ✓ Once dry, burnish the floor back to a smooth, clean, highly reflective shine. **Always burnish after using Betco One Step Restorer.** Select the proper burnishing pad and burnishing machine. Burnish the area until all the scuff marks, black heel marks or scratches are removed. Dust mop the entire area to remove any residue from the floor.

Spray Buffing:

- ✓ Prepare the area the same as when cleaning the floor as previously demonstrated.
- ✓ Apply spray buff sparingly to the area being buffed.
- ✓ Using the Betco floor machine and red pad, buff the area until all soils, scuffs and black marks are removed.
- ✓ After spray buffing has been completed the area should be dust mopped to remove any residue from the floor.

Clean up:

- ✓ Clean and restore all supplies
- ✓ Remove caution signs when floor is completely dry
- ✓ Note any problems

Floor Care - Interim Maintenance:

Preparation and Safety:

- ✓ Gather supplies and PPE
- ✓ Read MSDS and label instructions
- ✓ Remove obstacles
- ✓ Post caution signs

Chemicals, equipment, supplies:

Procedures:

- ✓ Prepare the area you will be cleaning by removing any furniture or other items.
- ✓ Using a floor scraper, remove stickers, gum, tape or other debris. Then dust mop or sweep the floor.
- ✓ Next, you'll prepare your equipment and cleaning solution. **(Betco Best Scrub or Daily Scrub SC)**
- ✓ Before scrubbing, use a doodlebug and top scrub solution along the edges and hard to reach areas. Squeegee the solution into the path of the scrubber for pick up after scrubbing.
- ✓ To insure all embedded soils are removed, we recommend a double scrub method. This is accomplished by applying the top scrub solution with the

squeegee up and the vac motor off. Apply the solution over a section of the floor allowing the solution to dwell as you scrub the area.

- ✓ As you begin the second pass, drop the squeegee and turn on the vac motor. Pick up the solution and then check the floor for a consistent look. If there is still embedded dirt and discoloration, the floor most likely needs to be stripped. If the floor is clean, you are ready to apply new finish.
- ✓ For obstructed areas or if an auto scrubber is not available, use a Betco floor machine and a wet/dry vac. Apply the top scrub solution with a mop, scrub the floor with the standard floor machine using a green or blue pad and recover the solution with the wet/dry vac. As with the automatic scrubber, use the doodlebug to scrub baseboards or hard to reach areas. Squeegee the solution into the path of the wet/dry vac for pick up.

Detail Rinse:

- ✓ After the area is cleaned, fill the auto scrubber with clean cool water to detail rinse. If you did not have an auto scrubber, simply fill a mop bucket with clean cool water to detail rinse the floor. Be sure to mop the edges or hard to reach areas that the scrubber may have missed.
- ✓ Allow the floor to dry. A fan may be used to speed this process. Check the floor with the palm of your hand to be sure there isn't any residue that may interfere with the new floor finish. If a white powder comes off on your hand, you will need to detail rinse again. Your objective is to have a clean, dry film free floor to begin the application of the new finish.

Applying new finish:

- ✓ The preferred method of applying floor finish is with the **Betco Quick Coat II Applicator system**. This tool will quickly and effectively assist you to professionally apply floor finish. Start by rinsing out the applicator mop and attach mop and head to the handle. Choose the appropriate floor finish and place in the **Quick Coat II** back pack.
- ✓ We recommend first puddling the finish to saturate the mop head. Simply squeeze the trigger to release the finish as needed. If finish is to be applied close to the wall, then run the applicator sideways along the wall.
- ✓ There are different techniques for applying the finish, but the following is recommended:
 - First, box out the area to be finished, but no larger than 8' by 20'. Squeeze the trigger as you outline the area to apply enough finish on the floor.
 - Use an overlapping figure eight motion to evenly spread the finish. If more finish is needed, squeeze the trigger as the applicator head passes in front of you versus on the turns.
- ✓ Do not constantly squeeze the trigger or too much finish will be applied. The weight of the applicator head and the overlapping figure 8 motion will evenly spread out the finish. Any ridges can easily be corrected and smoothed over with the applicator. Add more finish if streaking is

apparent. Typically, 1,000 sq. ft. can be coated in less than 10 minutes with **Quick Coat II**.

- Simply use a can liner to store your applicator between coats. To change bags, turn the valve to the off position and unscrew the L connector and tubing. Attach a new bag and turn the valve back on.
- ✓ If the **Quick Coat II** applicator is not available, use a clean bucket and wringer and place a clean trash liner in the bucket before filling with one of Betco's floor finishes. Using a finish mop apply the finish to the floor. Always be sure the finish mop is clean and well rinsed out before you begin.
- ✓ Start by boxing out the area to be finished, normally no larger than 8' x 20'. Then apply the finish using an overlapping figure 8 motion.
- ✓ Conventional floor finish will require approximately 30 minutes to dry under normal temperature and humidity conditions. Elevated temperature and humidity may extend the dry time. After 10 minutes of drying, you can increase the airflow in the room by using a floor fan. Position the fan toward the ceiling to circulate the air.
- ✓ Because the floor has been deep scrubbed, multiple coats of finish will be applied. Consult label instructions for the proper number of coats.
- ✓ To prevent build up of finish along the edges, keep the first and last coats of finish approximately one tile's width away from the wall.

Clean up:

- ✓ Clean and restore all supplies
- ✓ Remove caution signs when floor is completely dry
- ✓ Note any problems

Floor Care – Restorative Maintenance – strip and recoat

- ✓ Notify any vulnerable employees or occupants before the procedure is conducted.

Preparation and Safety:

- ✓ Gather supplies and PPE
- ✓ Read MSDS and label instructions
- ✓ Remove obstacles
- ✓ Post caution signs

Chemicals, equipment, supplies:

1. **Quickcoat "Hard As Nails"**
2. **Quickcoat Applicator**
3. **Betco Best Scrub**

Procedures:

- ✓ You'll need to prepare the area you will be cleaning by removing any furniture or other items.

- ✓ Using a floor scraper, remove stickers, gum, tape or other debris. Then dust mop or sweep the floor.
- ✓ Next, you'll prepare your equipment and stripping solution
- ✓ Attach the black strip pad to the automatic scrubber or stripping machine and be sure the wet floor signs are properly placed.

Stripping the floor:

- ✓ Apply the stripper solution freely to the floor. Allow the solution to stand for 10 minutes being careful to not let the solution dry. If the stripping solution does dry, simply apply more solution to the area and rescrub.
- ✓ Before stripping, use a doodlebug and stripping solution along the edges and hard to reach areas. Then squeegee the solution into the path of the scrubber for pick up.
- ✓ To insure all existing finish is removed, we recommend a double scrub method. Apply the solution over a section of the floor allowing it to dwell for 10 minutes. Start scrubbing with the squeegee up and the vac motor off. As you begin the second pass, drop the squeegee and turn on the vac motor. Pick up the solution and then check the floor for any residual finish.
- ✓ For obstructed areas or if an automatic scrubber is not available, use a Betco floor machine and a wet/dry vac to strip the floor. Apply the stripping solution with a mop, scrub the floor with the standard floor machine using a stripping pad and recover the solution with the wet/dry vac. As with the automatic scrubber, use the doodlebug to scrub baseboards and hard to reach areas and then squeegee the solution into the path of the wet/dry vac for pick up.

Detail rinse the floor: use the same procedures as described for interim maintenance

Apply the new finish: use the same procedures as described for interim maintenance

Clean up:

- ✓ Clean and restore all supplies
- ✓ Remove caution signs when floor is completely dry
- ✓ Note any problems

Carpet Care – Routine Maintenance – Vacuuming

Preparation and Safety:

- ✓ Gather supplies and PPE
- ✓ Read MSDS and label instructions
- ✓ Remove obstacles
- ✓ Post caution signs

Chemicals, equipment, supplies:

1. Hepa vaccum

Procedures:

- ✓ Check schedule for areas to vacuum
- ✓ Check vac filter and replace if half full
- ✓ Remove large debris
- ✓ Plug vac in center of room. Vacuum matting. Vacuum appropriate areas.
- ✓ Note spots and stains to remove

Clean up:

- ✓ Clean and restore all supplies
- ✓ Check filter bags and replace if half full
- ✓ Remove caution signs
- ✓ Note any problems

Carpet Care – Spotting

Preparation and Safety:

- ✓ Gather supplies and PPE
- ✓ Read MSDS and label instructions
- ✓ Remove obstacles
- ✓ Post caution signs

Chemicals, equipment, supplies:

1. Spot Bet spotter

Procedures:

- ✓ Inspect area for spots, identify type of stain and select proper spotter solution
- ✓ Remove solid soils and blot up excess liquid. Dispense spotting solution in a straight spray versus a fine mist, agitate towards center and let solution dwell according to label instructions.
- ✓ Rinse area with clean water and blot or use spotting machine, **REPEAT IF NECESSARY**
- ✓ Vacuum area after spot removal

Clean up:

- ✓ Clean and restore all supplies
- ✓ Check filter bags and replace if half full
- ✓ Remove caution signs
- ✓ Note any problems

Carpet Care – Interim Maintenance

Preparation and Safety:

- ✓ Gather supplies and PPE
- ✓ Read MSDS and label instructions
- ✓ Remove obstacles
- ✓ Post caution signs

Procedures:

- ✓ Perform routine maintenance first
- ✓ Pre-spray heavily soiled areas with **Peroxide Cleaner.**
- ✓ Attach a wet bonnet pad and clean the appropriate area
- ✓ Use carpet dryers and increase ventilation and allow area to dry completely

Clean up:

- ✓ Clean and restore all supplies
- ✓ Check filter bags and replace if half full
- ✓ Remove caution signs
- ✓ Note any problems

Carpet Care – Restorative Maintenance

- ✓ Notify any vulnerable employees or occupants before starting the cleaning procedure.

Preparation and Safety:

- ✓ Gather supplies and PPE
- ✓ Read MSDS and label instructions
- ✓ Remove obstacles
- ✓ Post caution signs

Procedures:

- ✓ Perform routine maintenance first
- ✓ Pre-spray heavily soiled areas with **Peroxide Cleaner.**
- ✓ Extract the appropriate area with clean water
- ✓ Use carpet dryers and increase ventilation and allow to area to dry completely

Clean up:

- ✓ Clean and restore all supplies
- ✓ Check filter bags and replace if half full
- ✓ Remove caution signs
- ✓ Note any problems

Restrooms

Preparation and Safety:

- ✓ Gather supplies and PPE
- ✓ Read MSDS and label instructions
- ✓ Remove obstacles
- ✓ Post caution signs

Chemicals, equipment, supplies:

1. **Stix**
2. **Quat Stat**
3. **Green Earth glass cleaner**

Procedures: Clean from high to low, towards the doorway, and do dry work before wet work.

- ✓ Clean and disinfect all toilets and/or urinals. Remove urinal screens from the urinals and using the bowl swab, push water level down in stools. Apply **bowl cleaner** to the exposed interior surfaces of the bowls and/or urinals, specifically under the rim. Allow time for the chemical to work, while cleaning partitions and showers (approximately 10 minutes – follow manufacturer's directions). **DO NOT FLUSH**
- ✓ Remove trash from all waste receptacles. Clean receptacles with **disinfectant cleaner**. Replace liners if needed.
- ✓ Clean the exterior of all dispensers and re-stock supplies, including paper towel dispensers, feminine hygiene dispensers, toilet issues dispensers and hand soap dispensers.
- ✓ Clean all sinks using **disinfectant cleaner** and sponge, leave disinfectant on surfaces according to manufacturer's directions.
- ✓ Clean all mirrors with **glass cleaner** and micro fiber cloth.
- ✓ Remove graffiti from walls and stall partitions, clean stall partitions and walls as needed with **disinfectant cleaner**.
- ✓ Scrub the inside of the bowls and urinals with a bowl swab. Use an abrasive sponge for difficult soils. Clean the exterior of the bowls and urinals with disinfectant cleaner. Clean both sides of the toilet seat. Clean the walls around the bowls and urinals with **disinfectant cleaner**. Flush bowls and urinals. Polish all chrome surfaces with a dry cloth after cleaning with **disinfectant cleaner**.
- ✓ Treat sink, shower or floor drains with **drain maintainer**, if necessary.
- ✓ Clean both sides of entrance/exit doors with disinfectant cleaner, paying special attention to clean hand contact areas.
- ✓ Dust mop or sweep the floor and pick up collected debris with dustpan.
- ✓ Scrub the floor with a **disinfectant cleaner** using a wet mop, bucket and wringer. If needed, scrub floor grout with a tile and grout brush. Rinse with clear water. Squeegee or vacuum up excess water, if necessary.

Clean up:

- ✓ Clean and restore all supplies
- ✓ Remove caution signs

- ✓ Note any problems

✓

Hand Washing:

Proper hand washing is very important to limiting the growth of harmful microorganisms and the spread of infection and disease. Practicing good hand washing skills is one of the best routines you can do for yourself and for others.

Proper Hand Washing Techniques

- ✓ You should get in the routine of washing your hands frequently throughout the day, especially after the following activities:
 - Visiting the restrooms
 - Sneezing or coughing
 - Removing gloves
 - Handling money
 - Coming into contact with people who have colds or viruses
 - Visiting or touching public areas or items such as grocery carts, pay phones, restaurants and cafeterias and
- ✓ Gather paper towels if they are available.
- ✓ Wet hands with warm water. Warm water ensures that you get optimal lather for effective cleansing.
- ✓ Place soap in your palm. Be sure to use an amount the size of a nickel.
- ✓ Using vigorous friction, lather both hands and wrists completely for 15 to 30 seconds. An amusing, yet helpful habit is to sing the Happy Birthday song to yourself. Be sure to cover all surfaces of your hands, including the backs and between the fingers.
- ✓ Rinse thoroughly, making the water run downward off the skin.
- ✓ Dry hands completely with paper towels or an air dryer.
- ✓ Remember, you contaminate yourself the moment you touch another surface. So avoid touching areas as much as possible. Use a paper towel to turn off faucets and open exit doors.

In the absence of water, an alcohol hand sanitizer will be used.

Food Areas: Cafeterias, Break rooms, Etc.

Preparation and Safety:

- ✓ Gather supplies and PPE
- ✓ Read MSDS and label instructions
- ✓ Remove obstacles
- ✓ Post caution signs

Chemicals, equipment, supplies:

- 1. Quat Stat**
- 2. Green Earth glass cleaner**

Procedures:

- ✓ Separate recyclables from trash in appropriate containers.
- ✓ Wipe and disinfect trash and recyclable containers.
- ✓ Clean and disinfect all horizontal and vertical surfaces.
- ✓ Clean and disinfect hard floor surfaces.
- ✓ Vacuum carpeted floors.

Clean up:

- ✓ Clean and restore all supplies
- ✓ Remove caution signs
- ✓ Note any problems

Measuring/Diluting Concentrated Cleaning Products:

- ✓ Use appropriate protective equipment when mixing concentrated cleaning products, consult MSDS sheet.
- ✓ Follow manufacturer's dilution directions. Do not under- or – over-dilute concentrated cleaning products.
- ✓ Make sure that spray bottles (secondary containers) have appropriate labels.
- ✓ Never mix different cleaning products together.
- ✓ Create product selection wall charts.

Safety Issues:

OSHA Blood-Borne Pathogen Standard -

- 1. Use safety cones or other means to make sure that occupants do not come in contact with spills.**
- 2. Use proper personal protective equipments (i.e. gloves, goggles).**
- 3. Disinfect the areas with appropriate solution.**
- 4. Dispose properly in an appropriate bag.**

While OSHA required training does not deviate in a green maintenance program, because the Blood-Borne Pathogen Standard requires among other things the use of an intermediate grade disinfectant that is tuberculocidal (kills TB), proven effective against the Hepatitis B Virus (HBV) and HIV 1 (AIDS) or a specified dilution of chlorine bleach (sodium hypochlorite).

In a green maintenance program, it is recommended that a product specifically meeting OSHA's requirements be used along with all of the specified procedures (Universal Precautions), and this be clearly separate from the products and procedures used for general disinfection/sanitizing.

Handling Chemicals:

- ✓ Virtually all cleaning products present some hazards and should be handled carefully.
- ✓ Recommendations –
 - Train all workers in the safe handling and use of cleaning chemicals.
 - Use appropriate protective equipment when mixing and using cleaning products.
 - Ensure employees know where MSDS sheets are located and review how to use them on a regular basis.
 - Follow manufacture's label instructions.
 - Put appropriate labels on secondary containers such as spray bottles.
 - Never mix different cleaning products together.
 - Ensure that chemical are stored and disposed of properly.

Spills:

Generally it is preferable to address spills as soon as possible to minimize impacts on both health and the environment. Work with building occupants to communicate quickly to address spills.

- ✓ Clean spills while still fresh.
- ✓ Use the proper cleaning solutions.
- ✓ Dispose solution properly.
- ✓ Ensure that occupants know whom to contact in case of spills.

Indoors Plants:

- ✓ Educate occupants on appropriate care and guidelines for indoor plants.
- ✓ Ensure that plants are not in direct contact with carpets and unit ventilators.

Indoor plants are a wonderful addition to any facility. While the cleaning staff is typically not responsible for watering and caring for office plants, they frequently are called upon to address spills from watering, mold growth in carpets from dampness, aphids and other pests, and other problems. Furthermore, occupant's use of pesticides and fertilizers should be managed with care because these products can impact health. Thus, occupants should be educated on the proper appropriate care for plants. If plants are on carpets there should be blocks underneath to keep moisture from building up in carpeting.

Recycling:

Recycling is very important pollution prevention activity to reduce our burdens on the environment as a result of both solid waste disposal and the extraction of the natural raw materials. The recycling effort is guided by

regulations and mandated including EPA's Comprehensive Procurement Guidelines. Check with local waste haulers and recyclers to determine what materials are picked up and for the best sorting strategies. The following are suggested materials for recycling:

- Clear, green and brown glass bottles and jars
- White office paper (e.g., copier, bond, computer)
- Mixed office paper (e.g., ledger paper, folders, pamphlets, brochures, envelopes)
- Newspaper
- Cardboard
- Telephone and other books
- Scrap metal including steel containers
- Fluorescent lamps
- Toner and ink jet cartridges
- Batteries, compact discs
- Microfilm and recording tape
- Carpet
- Ceiling tiles
- Computer equipment
- Plastic

Procedures:

- ✓ Ensure that the building collection meets with the guidelines from the local recycling hauler and recycling facility.
- ✓ Ensure that occupants understand what can be recycled and how it needs to be separated.
- ✓ Food containers such as soda cans should be rinsed clean by occupants before placing them in recycling containers so as to not attract pests.
- ✓ Track recycling results.

Trash

- ✓ Ensure that trash, especially that which contains food waste are removed frequently and are not left in building over an extended period of time (i.e. weekends or holidays).
- ✓ Dispose properly and ensure that trash does not attract pests, birds, etc. nor create litter.
- ✓ Make sure that trash and recyclables are being separated properly.
- ✓ Make sure occupants know how to separate recyclables.

Hazardous Waste:

Hazardous waste can range from dangerous chemicals to sewage-contaminated carpet and includes materials that are highly flammable, corrosive, reactive, toxic or infectious. Keep a list of hazardous wastes as defined by your state or facility on file. Post a copy where all employees will

have access. Review the policy yearly to answer questions and ensure compliance with your policy.

Tracking Results:

Tracking results is key to demonstrating the effectiveness and value of a green cleaning program. Explain to employees and building occupants what you are going to do, why you are going to do it, how you will do it and when you are going to do it. Solicit feedback from employees and building occupants via surveys to measure success of the greening effort and continually make changes to improve the greening process.

Training: We will incorporate environmental preferable training procedures with current methods and insert finalized information here.

As with conventional cleaning programs, training is one of the keys to success. Green cleaning is no different and the following training process will insure a successful sustainable program implementation and support the LEED-EB certification efforts of PVCSD.

Initial training, periodic and corrective training will be meshed with current programs. The procedures and training segments will be presented to supervisors first and then incorporate management staff in employee training sessions to show management's commitment to the program.

- ❖ **Specific green training –**
 - Why PVCSD is offering this program to customers/occupants.
 - What are the benefits to employees and occupants?

- ❖ **Product/Equipment/Supplies –**
 - Description of new product, equipment and supplies
 - Compare to existing items
 - Dispensing methods
 - Safe use and storage information

- ❖ **Cleaning procedures –** (specific cleaning procedures will be taught, demonstrated and monitored; use the procedures outlined previously)

- ❖ **Methods of instruction –** (Distributor and other vendor personnel will perform initial and follow up training sessions on-site and in classrooms)
 - Lecture with training aids, videos, printed material
 - Hands on sessions
 - Specific web based sessions and 24/7 availability on vendor web sites

- Cleaning task cards will be created for specific tasks. (see example)
 - Wall charts for product selection guides for FastDraw system will be created. (see example)
- ❖ **Training attendance logs** should be maintained for initial, review and corrective training sessions for all personnel. (see example)

Communication:

To insure the success of **our program**, it must be communicated with your staff and clients. As described above, the reason and benefits of the program will be discussed with your employees during their initial training session. It is a good best practice to post program information at your locations and insert articles in company newsletters to continually demonstrate the commitment for the program.

Externally the program should be incorporated with your marketing information for prospective clients. Another method of communication is with local newspapers and radio/TV stations; they are always looking for “feel good” stories. Also it will be a best practice to communicate the status of the program with clients to reinforce how the green program is benefiting them. Another communication idea is to create a “green team” for each client location to obtain their commitment to the process. Typical team members would be site manager, one field worker and appropriate facility personnel, like operations manager, safety manager, etc.

Another component of the communication plan is the identification of employees or building occupants with special needs, physical and sensitivities, like dust, chemicals, noise, etc. When identified they should be notified of any products or procedures that may cause discomfort.

And finally **PVCSD** communication program will consist of comment cards for employee or occupant feedback (see example). This will be a very valuable asset for you to discover situations before they become major problems. The continual feedback and resulting responses will continue to build a successful program internally and with clients.

Staffing Requirements:

The definition of green cleaning is to lessen the impact of products and services on the health and the environment when compared to similar products and services used for the same purpose. We will find that staffing requirements will not change much for green cleaning. The major changes will be in products, equipment and supplies, not in procedures and time requirements.

The 2009 LEED-EB Version 3 document, Indoor Environmental Quality Credit 3.2, requires the use of the APPA Leadership in Education Facilities Custodial Staffing Guidelines to determine the appearance and staffing levels of facilities. (This topic should be discussed to determine its usefulness or incorporation with current staffing programs; Betco also has a simple work loading program for your use to determine staffing levels)

Glossary of Terms:

Acrylic – type of polymer found in floor finishes.

Acute effect – an adverse effect that develops rapidly from a short term high level exposure to a material.

Alkalinity – useful in removing acidic, fatty and oily soils.

Allergic reaction – an abnormal physiological reaction to chemical or other stimulus.

All purpose cleaner – a detergent suitable for general cleaning duties.

Antimicrobial – an agent which inhibits or destroys bacteria, fungi, protozoa or viruses that are pathogenic.

Asphyxiant – a vapor or gas which can cause unconsciousness or death by suffocation.

Bacteria – single cell microorganisms not containing chlorophyll.

Butyl cellusolve (butyl) – a water soluble solvent frequently used in degreasing products.

Carcinogen – cancer causing agent.

Concentrated chemicals – the undiluted form of a dilutable cleaning product.

Chronic toxicity – adverse affects caused by continuous or repeated exposure to a harmful organism over a period of time equal to ½ of the organism's lifetime.

Corrosion – process of gradual eating away by chemical action.

Cross-contamination (cross-infection) – the process of transferring bacteria from one person or an object to another person.

Design For The Environment (DFE) – EPA's voluntary partnership program which works with industry sectors to improve the performance, health and safety attributes of products.

Detergent – synthetic cleaning agent which is useful in physical removal of soils.

Disinfectant – an agent that destroys harmful bacteria and/or viruses on inanimate surfaces. Products making disinfectant claims must be registered with the EPA.

Ecolabeling – A labeling system which helps end users identify green products. The Ecolabel ensures the product was evaluated by an independent non-biased third party for performance and environmental attributes.

EcoLogo Program (Canada) – Canada’s Ecolabeling program that identifies products and services that are less harmful to users, occupants and the environment.

Ecosystems - An ecological community together with its environment, functioning as a unit.

Environmental impact – the possible adverse effect of the release of a material into the environment as listed in MSDS information.

Environmentally preferable product – A product that has a reduced impact on the health and safety of workers, and the environment compared to traditional products.

Environmental Protection Agency (EPA) – has responsibility to regulate the environmental issues. A governmental branch responsible for safeguarding our nation’s land, water, and air resources.

EPA – Environmental Protection Agency. Governmental branch responsible for safeguarding our nation’s land, water, and air resources.

Federal Insecticide Fungicide and Rodenticide Act (FIFRA) - products that make claims such as sterilizers, disinfectants, or sanitizers must be registered under this act.

FIFRA – Federal Insecticide Fungicide and Rodenticide Act. Products that make claims such as sterilizers, disinfectants, or sanitizers must be registered under this act.

Flammability – the capacity of a material to ignite easily and burn rapidly.

Flash point – the lowest temperature at which the vapor from a product will ignite.

Fungi (fungus) – vegetable organisms that lack chlorophyll and are filamentous. Fungus includes mold, mildew, yeast and mushrooms.

Fungicide – a chemical agent that destroys fungi.

GS-37 – Green Seal standard for Bathroom Cleaners, General Purpose Cleaners, Glass Cleaners and carpet cleaners.

GS-42 – Green Seal standard for cleaning service providers, including in-house and building contractors, to create a Green Cleaning program that protects human health and the environment.

GS-41 – Green Seal standard for hand cleaners, industrial and institutional, for non anti-bacterial products. This standard does not include products used in households, food preparation operations or medical facilities.

GS-40 – Green Seal standard for floor finishes and floor strippers.

Germicide – any substance that kills germs. Another name for a disinfectant.

Gram positive and gram negative – classification of bacteria by their reaction to staining. A dye is applied to bacteria and those that remain permanently stained are gram positive. If the stain is easily removed they are gram negative. Staph and Strep are examples of gram positive bacteria. Pseudomonas and salmonella are examples of gram negative bacteria.

Green Cleaning – cleaning to safeguard human health while minimizing the impact on the environment.

Green Seal – Non-profit agency that works with manufacturers, industry sectors, purchasing groups and government branches to “green” the production and purchasing chain. Their mission is to achieve a more sustainable world by promoting environmentally responsible production, purchasing and products.

Hazardous material – any substance having the properties capable of producing adverse effects on the health or safety of people.

HEPA filters – “High Efficiency Particulate Arrestance” the filter must retain and filter out all particles from the air that passes through it down to 0.3 microns in size at an efficiency rating of 99.97%.

Infection – a condition in which microorganisms have entered the body and produced an adverse reaction.

Ingestion – taking a substance into the body by mouth.

Inhalation – taking a substance into the body by breathing.

Inorganic – a substance not made of the combination of carbon and hydrogen.

Irritant – something that causes an inflammation reaction in the eyes, skin or respiratory system.

LEED – Leadership in Energy and Environmental Design. Rating system defines green buildings using a common set of standards created by United States Green Building Council.

LEED – EB – USGBC standard for existing buildings

LEED – NC – USGBC standard for new construction

LEED – CI – USGBC standard for commercial and interior projects

LEED – CS – USGBC standard for core and shell projects

LEED – H – USGBC standard for homes and the home building industry

LEED – ND – USGBC standard for neighborhood development

Lethal concentration (LC) – the concentration required to cause death in a given species of animal or plant.

Microfiber – material which provides dramatically more surface area to lift and trap dirt more effectively than traditional cotton fibers,

Microorganisms – plants or animals visible only with the aid of a microscope.

Mildew – a growth, usually white, produced by fungus.

Mold – a woolly growth, produced by fungus.

Molecule – the smallest unit into which a substance can be divided that retains all of the chemical identity of that substance.

Neutral – a chemical state that is neither acidic or alkaline (base); 7 on the pH scale.

Occupational Safety and Health Agency (OSHA) – establishes and enforces laws relating to worker safety.

Pathogen – any disease producing organism.

Pathogenic – disease producing.

Personal protective equipment (PPE) – equipment worn to prevent workers from harmful exposures or conditions.

Pesticide – an agent which prevents, repels, destroys or mitigates pests types include insecticides, disinfectants and sanitizers, rodenticides and herbicides.

pH – a simple chemical scale which expresses the degree of acidity or alkalinity of a solution. The scale runs from 0 to 14. 7 is the neutral point. Numbers below 7 indicate acidity. Numbers above 7 indicate alkalinity.

Pilot project – a test project to assist in implementing a green cleaning program.

Pollutants – waste material that contaminates air, soil, or water.

Post consumer fiber – paper, paperboard and fibrous wastes.

Ready to use chemicals (RTU) – cleaners that are not diluted before use.

Recovered fiber – post consumer content as well as manufacturing wastes from the paper-making process and re-pulped paper and paperboard from obsolete inventories.

Recycled materials – materials that are reused to make other products.

Recycled content – the portion of a container that has been made from reused materials.

Renewable resources - any natural resource that can replenish itself naturally over time, as wood or solar energy.

Sanitizer – an agent that reduces the number of bacteria to a safe level but does not completely eliminate them, as judged by public health requirements.

Solvents – substances used to solubilize other materials.

Source reduction - refers to any change in the design, manufacture, purchase, or use of materials or products (including packaging) to reduce their amount or toxicity before they become municipal solid waste.

Surfactant – surface-active-agent which increases the emulsifying, foaming, dispersing, spreading and wetting properties of a product.

Sustainability – products and procedures that will maintain human health, the environment and facilities for future generations.

Toxic – substance causing adverse effects in the body like a poison.

United States Green Building Council (USGBC) – non-profit agency that addresses the significant impacts of building design and operation on human health and the natural environment.

Use dilution – the final concentration at which a product is used.

USGBC – United States Green Building Council – non-profit agency that addresses the significant impacts of building design and operation on human health and the natural environment.

Virucide – a chemical agent that kills viruses.

Volatile – that part of a product that evaporates during drying.

Volatile Organic Compound (VOC) - measure of ingredients that release into the air that can lead to poor indoor air quality.

Program Examination Tool:

1. Green Cleaning is cleaning to lessen the impact on the employee, building occupants, visitors and on the indoor and outside environment?
TRUE FALSE
2. A benefit of Green Cleaning is reduced absenteeism?
TRUE FALSE
3. The Green Seal organization certifies products as being environmentally preferable.
TRUE FALSE
4. Green finish strippers will take off regular floor finish also?
TRUE FALSE
5. LEED-EB certification is only for extra big buildings?
TRUE FALSE
6. Having an entryway matting system with a plan for its maintenance will earn a LEED-EB certification point?
TRUE FALSE
7. Recycling aluminum can, paper, plastic and glass will earn LEED-EB certification points?
TRUE FALSE

8. Using micro fiber mops is a Green Cleaning best practice?
TRUE FALSE
9. Using GS37 certified products is a Green Cleaning best practice?
TURE FALSE
10. Identifying building occupants that have special needs or sensitivities to certain chemicals is a Green Cleaning best practice?
TRUE FALSE
11. Eating more green beans is a Green Cleaning best practice?
TRUE FALSE
12. Always wear the manufacturer's recommended personal protective equipment (PPE) when performing normal duties?
TRUE FALSE
13. Don't worry about reading product label directions?
TRUE FALSE
14. Always use the product with the highest pH value when cleaning?
TRUE FALSE
15. When selecting paper products, select ones with maximum recycled content?
TRUE FALSE
16. Micro fiber mops are only used in tiny little spaces?
TRUE FALSE
17. When selecting vacuum cleaners, select one with a db noise level less than 70?
TRUE FALSE
18. When selecting an auto scrubber, insure the machine has a solution metering device to minimize the amount of liquid applied?
TRUE FALSE
19. When you start a Green Cleaning program, create a team consisting of personnel from many departments?
TRUE FALSE