

The following is a list of green / sustainable practices, and changes that the Custodial & Paint / Masonry staff has made to their departments

Equipment

Vacuums - All carry Bronze or Silver certification by the Carpet and Rug Institute
These products have high filtration or carry a certified HEPA designation. We have increased the use of larger vacuums when possible to increase productivity, decrease labor hours and improve indoor air quality. A handful of these machines also are powered by advanced AGM battery technologies. Below is a list of vacuums we are currently using:



Extractors/ Carpet Machine- All carry Bronze or Silver certification by the Carpet and Rug Institute. These products have high filtration, efficient motor design and clean carpeted floor surfaces with minimal amounts of water. Has a dual cleaning mode (DCM), low- moisture technology for faster drying times, reduced cost to clean, increased productivity and sustainable operation.



Floor Scrubbers- All carry Bronze or Silver certification by CRI. Many of these machines also have a variety of other advanced technologies such as AGM batteries, HEPA filtration and the ability to use long lasting brushes in the place of disposable cleaning pads.

Floor Scrubbers - Computer water controlled output



Floor Scrubber/Strip machine - Uses water only to strip floors



BOOST, Tomcat Edge and Square Scrub machines provide CHEMICAL FREE stripping, labor savings and reduce water consumption.

KaiVac No-Touch Cleaning technology – Equipped with Hepa Filter

KaiVac No-Touch Cleaning technology was designed to use the minimum amount of chemicals in order to remove the maximum amount of potentially harmful soils and bio-pollution in the most cost-efficient manner.



Sustainable waxing process

- Changed to an improved more durable wax, reducing the amount of coats needed
- Reduced the amount of buffing required, which reduces the atomization of dust particles, therefore improves indoor air quality
- Reduced buffing which decrease the amount of electricity used
- This wax lasts longer, reducing the stripping / waxing cycle

ProSpeed applicator

- Simplifies the process of applying floor finish with an ergonomic application tools, this simple delivery system can apply finish to 2000 square feet area in half the time. The ProSpeed system can deliver a consistent waxed surface, improved productivity and virtually eliminates waste.



Microfiber Cleaning Materials

Microfiber is a superior cleaning material and physically attracts dirt via static. Because it can be laundered up to 500 times, it reduces the amount of material that goes into the waste stream.

- Have color coded all microfiber cleaning cloths and floor mops to prevent cross contamination
- All cotton and polyester string mops have been replaced with microfiber which contain continuous filament microfiber and polyester that triple their lifespan in comparison to traditional mops
- All flat dust mops have been replaced with continuous filament microfiber which withstands twice the laundry cycles and contains 70% recycled materials
- All dusters have been replaced with microfiber
- All cotton rags have been replaced with microfiber



Rubbermaid Wavebrake Buckets

Keeps clean water separate from dirty water, resulting in improved cleaning, reducing cross commutation.



New Product- Green / Increase percentage of post consumer content

- Paper towels - 40% post consumer recycled fiber content
- Hand sanitizer Green
- Toilet tissue - 20% post consumer waste
- Hand soap - Green
- Shower soap - Green
- Can liners - 20% - 70% post consumer waste
- Pro-strip stripper – Has a lower odor and has no ammonia or butyl in it

Product Reduction

Out of the 14 chemicals we use now 11 are Green or Environmentally Preferred. We have also implemented the use of the following green products or products that contain more post-consumer fibers.

Product Reduction

Product review committee information 2009-2010-2011-2012

2009 There was 129 Products in the warehouse.

2010 The product review committee removed total of 38 chemicals, leaving 91 still to review.

2011 The product review committee removed total of 44 chemicals, leaving 47 still to review.

2012 The product review committee removed total of 30 chemicals, leaving 14 chemicals.



Entry matting system

We have implemented entrance matting systems throughout the WVU Campus that has reduced 80 percent of all the soil, dust, contaminants, and moisture entering a facility that are tracked in on the shoes of building staff and visitors.

A matting system that can reduce soil being tracked into a building has a ripple effect in reducing cleaning and maintenance costs. Hard surface floors and carpets stay cleaner longer, without the need to mop, sweep, and vacuum as frequently.

Maintenance

- The estimated cost of finding and removing a pound of dirt from a building is \$600. (ISSA)
- One square yard of carpet can accumulate one pound of dirt in a week- twice that in inclement weather.
- 70 to 80 percent of dust, grime, and dirt in a building are tracked in from the outside on people's feet permanently damaging floors and carpets. (Institute of Industrial Launderers)
- Fifteen feet of effective, high-performance matting can trap and hold as much as 75 percent of this soil at the door; 30 feet can remove as much as 100 percent. (ISSA)

Recoarse II Carpet

Recoarse II protects your facility by trapping excess dirt and moisture at the door. Scraper fibers remove soil and debris, while reinforced nylon fibers remove moisture before it enters your facility. RE backing is made with a minimum of 30% total recycled content, including 10% post-consumer recycled content by total product weight.

Waterhog ECO Fashion Elite Entrance Mats

Carpet top is made from 100% post-consumer recycled PET polyester reclaimed from plastic bottles. Backing is made with SBR rubber with 15% post-consumer recycled tires with a smooth back. These 3/8" thick mats with rubber reinforced bi-level cleaning surface effectively stops dirt and moisture at the door.

Trash Can Liners

On most trash liners we went from 10% post-consumer recycled content to between 30%- 70% post-consumer recycled content and we went with exact fitting can liners to reduce the amount of plastic that goes into landfill.

Last year we used a 21.5" x 25" 8 micron office trash bag. This year we went to a 20" x 25" .5 microns office trash bag by reducing length and microns we saved,

- 5,352 lbs of plastic not going to waste stream
- 33"x39" went from 10% post-consumer recycled content to 70% post-consumer recycled content
- 40"x46" went from 10% post-consumer recycled content to 70% post-consumer recycled content
- 38"x63" 2.5 mil. went to a 38"x58" 1.2 mil bags we used 5000 bags last year and saved 893 lbs of plastic going into landfill by changing to the right fit bag

Training Classes

- All New Employees receive Basic Training in using green products and following green cleaning processes
- All Leads, Supervisors and Managers receive annual advanced training in green cleaning procedures
- All Campus Service Workers receive annual training on cleaning for (health) procedures
- WVU Campus Operations is committed to Green Sustainable Cleaning
- WVU Campus Operations has been trained in Healthy High Performance Cleaning

Implemented processes to Improve indoor air quality and sustainable cleaning

- Reduced atomization cleaning chemicals
- Eliminated aerosols
- Identified Common Touch Points
- By utilization of the ATP Meter, we are able to measure cleaning efficiencies
- Increased the use of Green and Environmentally preferred products
- Chemical Free Floor Stripping Procedures
- No-Touch cleaning system for restrooms

Measuring cleaning efficiencies / Product testing

ATP meter

Is a tool we use to help measure the percentage of contaminants found on surfaces at WVU before and after the surface has been cleaned. This information helps us make sure that the chemicals we are using is removing the highest percentage of contaminants.



Facilities Management Operation standard for all buildings is 0-30 if possible.

SystemSURE Plus™
ATP Hygiene Monitoring System



Hygiene Suggested* ATP Levels of Clean		
Critical use on surfaces/food prep areas	Ultra-Clean	0-10
Critical touch points	Very-Clean	11-30
Floor equipment and typical microfiber towel performance	Clean	31-80
Caution: Surface should be cleaned and has some risk of contamination from disease-causing bacteria (typical mopping practices perform in this rang)	Somewhat Dirty	81-200
Warning: Surface needs cleaning and has medium risk of contamination from disease-causing bacteria	Dirty	201-500
Danger: Surface needs cleaning and has medium to high risk of contamination from disease-causing bacteria	Very Dirty	501-1000
Danger: Surface needs cleaning and has high risk of contamination from disease-causing bacteria	Filthy	>1000

Green and Sustainable Practices with WVU's Paint and Masonry Shops

Paints and Products

- In 2012 we have changed our primary line of paint from a traditional high VOC paint to 0 VOC green guard paint which is used in 90% of all interior areas on campus. These areas include all student housing complexes, Athletic facilities, academic building and office complexes. This has made great improvements in worker safety and also indoor air quality
- We have eliminated 85% of all highly volatile oil based paints used traditionally on campus to coat all interior and exterior metal surfaces. We are now purchasing a zero VOC water base acrylic paint for all metal surfaces.
- In years past we used a highly toxic two component epoxy coating or an oil based enamel to paint flooring in all labs, locker rooms and workshops on campus. These coats had to be chemical and water resistant and be able to give us the hardest and most durable surface possible. We have replaced 100% of these products with a top quality low odor, low Voc epoxy, which is water based.

Eliminating Harmful materials and recycling waste

- In the past two years we have eliminated 98% of all toxic thinners and solvents used on campus by the paint shop. Our change from oil based products to water base products has helped us accomplish this.
- We have two safe storage areas set up on campus to recycle 100% of the small amount of thinners and solvents still used on campus.
- All water based paint waste is also stored in a safe storage area and recycled.

Sustainable practices implemented on campus

- We use a water sanding method in most interior areas to eliminate dust and help improve indoor air quality.
- We install wall protection in public areas to help protect the walls and paint from damage, which in- turn extends the life of the paint.
- We use washable canvas drop cloths to help eliminate the use of disposable plastic ones.
- We store used paint rollers and brushes for days with plastic covers. This help save cleanup time and conserve water. We use less than half the water and time cleaning up now with these new practices implemented.
- We now purchase liners for all paint piles and roller pans which can be used numerous times before they disposed of. These products have totally eliminated water clean-up.

Changing of the automotive fleet

- In the past four years we have added four three cyler six passenger Cushman vans. With these vehicles we can transport numerous staff throughout campus. Each of these vans gets more than 35 miles per gallon.
- We have also purchased one totally electric six passenger van. It is an eco-friendly vehicle that produces zero emissions and cost less than three cents per mile to operate. It is used on campus daily by the staff.

We are replacing large six and eight cylinder vans with smaller more efficient four cylinder vehicles, which has doubled our gas mileage in some cases.

