



Green Cleaning

A Comprehensive Guide
to a Safer and More
Environmentally
Preferable Working
Environment

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WausauPAPER

“WHY” GREEN CLEANING

■ **Green Cleaning** is not a “fad” - it is here to stay and it is growing fast. Recent innovations in the cleaning industry have helped to launch the Green Cleaning Movement by which we can have safer, healthier and more productive facilities. We can now do this with newer technologies that perform equally as well and are as cost effective as their traditional counterparts while also reducing negative impacts on health and the environment

■ **Green Cleaning** changes the traditional purchasing criteria from just performance and cost, and focuses on achieving the “best value” for the facility. This changes the purchasing equation from the lowest initial cost to one that, in addition to performance and cost, considers product usage, training requirements, impacts on worker and occupant health and safety, and environmental impacts. Green Cleaning is a proven winner when this new focus is included.

■ **Green Cleaning** products and services are increasingly being required by contracts and bid specifications by governmental entities, schools, commercial offices, healthcare facilities, hotels and other organizations. Furthermore, the adoption of Green Cleaning standards continue to accelerate as they are promoted by labor unions, green organizations like the US Green Building Council and advocacy groups including those for healthy schools, children and the environment.

GREEN CLEANING DEFINED

■ *Green or environmentally preferable products* are defined in Presidential Executive Order 13101 as “products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose.”

■ Green Cleaning includes the use of Green Products, but goes far beyond just the products. Rather, Green Cleaning is a comprehensive program that evaluates the unique needs of the building and its occupants, and also evaluates the cleaning chemicals, janitorial paper, cleaning equipment, procedures, and training programs.

GREEN CLEANING STANDARDS, REQUIREMENTS and BEST PRACTICES

While there are no federal laws that mandate Green Cleaning, *nor* mandate the specific standards required as part of a Green Cleaning program, there are a number of standards, requirements and best practices that are consistently appearing in Green Cleaning programs. The following standards and best practices have been adopted by organizations and programs like the US Green Building Council's *LEED for Existing Buildings Rating System*, Hospitals for a Healthy Environment's *Green Guide for Healthcare*, and the Collaborative for High Performance Schools' (CHPS) *Maintenance and Operations Manual*. These include:

■ CLEANING CHEMICALS

- Green Seal's *Standard for Industrial and Institutional Cleaners (GS-37)* for general purpose, washroom, glass, and carpet cleaning chemicals. (www.greenseal.org)
- California Air Resource Board/California Code of Regulations (CCR), Title 17 CCR Section 94509 for cleaning chemicals not covered by the Green Seal standard (e.g. furniture polish and metal cleaner) (www.arb.ca.gov/consprod/regs/Cpreg.doc)
- Floor finishes that do not contain metal crosslinking compounds (metal-free) and that are durable to reduce the frequency of stripping and recoating.
- Hand soaps that do not contain antimicrobial agents (e.g. Triclosan) except where required by law or regulations (i.e. healthcare or food preparation).

■ JANITORIAL PAPER PRODUCTS

(Bath Tissue and Paper Towels)

- EPA's *Comprehensive Procurement Guidelines* for recycled content in janitorial paper products bleached (whitened) without the use of chlorine or its derivatives. (www.epa.gov/cpg/products/tissue.htm)
- Products should be dispensed from large rolls to minimize packaging and waste. Folded paper towels are discouraged.
- Dispensers for paper towels should be "hands-free" to reduce the potential for cross contamination associated with dispensers operated with levers or cranks.

- High-capacity dispensers that promote waste reduction by controlling towel usage should also be used.
- Often used as a "best practice" by many different organizations, Green Seal's Standards for Tissue (GS-1) and Towels (GS-9) include 100% recycled fiber as well as bleaching and de-inking process free of chlorine and its derivatives. Green Seal's Tissue & Towel Standards include additional requirements for papermaking processes and packaging that exceed the EPA guidelines. (www.greenseal.org)

■ JANITORIAL EQUIPMENT

(Vacuum Cleaners and Floor Buffers)

- Carpet and Rug Institute's *Green Label Program* for vacuum cleaners. (www.carpet-rug.com)
- High-speed burnishers with active vacuum attachments that capture fine particles.
- Carpet extractors and automatic floor scrubbers that reduce water consumption.

■ MISCELLANEOUS PRODUCTS and TOOLS

- Entry way matting systems are recommended or required for all entrances and should be approximately 10 to 12 feet in length.
- Micro-fiber dusting cloths and flat mops are often identified as "best practices" as they out-perform traditional dusting and mopping materials and can often be used to remove soils without the need for chemical cleaning compounds.
- Integrated Pest Management programs are frequently required which prevent pests from entering the building; manage food sources, moisture and nesting areas; use of the least toxic pest methods when necessary to eliminate pests; and typically require pre-notification of occupants prior to pesticide applications.

■ TRAINING and PROCEDURES

While there are no precise standards identified by Green Cleaning programs, they do recognize the importance of appropriate training for janitorial workers. These programs realize that to achieve the healthiest indoor environment, it is essential that product users are properly trained and they work in an organized manner.



The “BENEFICIARIES” of GREEN CLEANING

■ COMMERCIAL BUILDINGS

Most often the largest expense in any commercial office setting is the salaries and benefits paid to the occupants. Scientific studies conducted both in the United States and abroad have demonstrated that healthier, greener indoor environments have a positive impact on worker productivity. These studies place the productivity improvements between 0.5 percent and 7 percent, with most suggesting that a 2 percent improvement is not unreasonable. So just in the same way a company invests in computers and other technology to improve worker productivity, investing in Green Cleaning can offer an enormous return on investment. Additional benefits can include:

- Reduced liability
- Reduced employee absenteeism
- Reduced employee turnover
- Reduced occupant complaints
- Reduced vacancy costs
- Increased tenant satisfaction
- Increased tenant retention
- Increased marketability of the property

■ HEALTHCARE FACILITIES

Nosocomial infections are a major problem in healthcare, resulting in the deaths of some 90,000 people each year and having huge financial impacts for healthcare organizations. While not all hospital-acquired infections are a result of poor sanitation or hand washing, estimates suggest that between 30 and 40 percent could be avoided through better practices. In addition, occupational asthma for nurses and other staff is increasing. Green Cleaning can help healthcare facilities rethink their cleaning strategies, to re-evaluate the products used to clean and disinfect, and to minimize the impacts on patients, staff and the environment. In addition, Green Cleaning is a requirement of the new *Green Guide for Healthcare* developed by Hospitals for a Healthy Environment as well other efforts to improve the delivery of quality healthcare, while at the same time reducing the healthcare industry's impacts on the environment.



■ SCHOOLS AND UNIVERSITIES

Studies funded by the U.S. Environmental Protection Agency have demonstrated that healthier school environments have a direct impact not only on school attendance, but also on student performance on standardized tests. Such a study recently in a Washington, DC elementary school demonstrated that the number of students meeting the minimum requirements in math increased by 49 percent and those meeting the minimum requirements in reading increased by 27 percent¹. In addition, Green Cleaning is a requirement of school programs such as those developed by the Collaborative for High Performance Schools (CHPS) and the Healthy Schools Campaign. Green Cleaning can be a cost-effective strategy to help improve performance of our schools while also reducing their impacts on the environment.

■ LODGING AND HOSPITALITY

In the same way green programs reduce the impacts from laundering towels in hotel rooms resulting in the savings of water, detergents and energy, Green Cleaning programs can have similar environmental benefits. In addition, organizations such as the "Green" Hotels Association® and the U.S. Environmental Protection Agency are promoting green programs for travel, lodging and conferences which are increasing awareness and the opportunity for properties to differentiate themselves based on environmental issues. (www.greenhotels.com)

■ JANITORIAL CONTRACTORS

Competition among janitorial firms is fierce creating significant opportunities for contractors to implement Green Cleaning programs as a means to differentiate themselves. In addition, healthcare costs are among the highest expenses for such firms and the use of green products can help reduce the potential for harm to occur. Green Cleaning programs are being increasingly supported throughout the industry including major trade associations such as the Building Services Contractors Association International (BSCAI) who sponsors workshops and training to help contractors implement green programs.

¹Berry, PhD, Michael A; Healthy School Environment and Enhanced Educational Performance - The Case of Charles Young Elementary School, Washington, DC; Carpet & Rug Institute, January 2002.



IMPACT of GREEN CLEANING on the ENVIRONMENT

Cleaning of the approximately 3,700,000 commercial and institutional buildings in the United States has resulted in the creation of a huge industry. Each year these buildings consume enormous quantities of cleaning products that make sizable impacts on the environment in terms of both resource consumption and impacts during product use and after disposal at which time they enter the environment. These products and impacts include:

■ 6 BILLION POUNDS OF CLEANING CHEMICALS:

- Most cleaning chemicals are made from petroleum, a valuable but limited non-renewable natural resource. Green alternatives are available made from rapidly renewable natural resources such as corn, soy, citrus fruits and coconuts.
- Cleaning chemicals contribute 8 percent of non-vehicular volatile organic compounds (VOCs) which cause atmospheric smog when they evaporate. Green alternatives are available that have low or zero VOCs which reduce the pollutants in our buildings where they are inhaled by the occupants and from there enter the atmosphere.
- Many of the ingredients used to formulate traditional cleaning are known to be toxic once they enter the environment even when properly disposed down a sanitary drain. This is due to the ineffectiveness of our municipal treatment plants and the amount of effluent that directly enters open waterways. These ingredients are known to be toxic to aquatic life, endocrine modifiers and reproductive toxins. Green alternatives are available that are formulated without these ingredients.
- There are few tools that help buyers easily identify environmental impacts of traditional cleaning products including the Occupational Health and Safety Administration's (OSHA) Material Safety Data Sheet (MSDS). In addition, the MSDS is not audited for accuracy. Green alternatives are "certified" by Green Seal, a non-profit environmental organization in Washington, DC, which also includes an on-site facility audit of the manufacturer to ensure that products meet their strict environmental, health, safety and performance requirements.

■ 4.5 BILLION POUNDS OF JANITORIAL PAPER PRODUCTS:

- Currently the majority of the janitorial paper products are made from virgin tree fiber requiring the cutting of 25 to 50 million trees annually making a huge impact on our forests. Green alternatives are available that are made from recycled fiber reducing the need to cut trees and the impacts on our forests.
- Production of paper products has enormous environmental impacts and as an industry is the third largest user of energy in our country and consumes large quantities of fresh water. As an alternative, recycled paper reduces water pollution by 35 percent and decreases air pollution as much as 74 percent by helping eliminate many toxic pollutants from entering the atmosphere.
- A significant portion of traditional paper products are bleached with chlorine which many scientists believe that it, its unintended contaminants and breakdown byproducts once they enter the environment are extremely toxic. Recycled alternatives are available that are processed without the further use of chlorine reducing the potential for harm.
- There are few standards that help buyers easily identify the health or environmental impacts of traditional paper products. Green alternatives are available that are "certified" by Green Seal a non-profit environmental organization assuring that the products are made from 100 percent recycled fiber; meet EPA guidelines for post-consumer content, and are not bleached using chlorine or any of its derivatives.

■ 500 MILLION POUNDS OF JANITORIAL EQUIPMENT:

- Every year millions of pounds of janitorial equipment such as vacuum cleaners and floor buffers that are no longer usable are disposed in landfills, enough to fill 10,000 garbage trucks. Green alternatives are available that are more durable which extends its useful life thus reducing the consumption of natural resources consumed during manufacturing and the impacts on our landfills during disposal.
- Many traditional machines such as vacuum cleaners and high speed burnishers because of their lack of ability to capture small particles cause dust, dirt and debris to become airborne contributing pollutants to the indoor environment. Green alternatives are available that capture these small particles and allow them to be safely disposed.
- Many floor machines such as large automatic floor scrubbers and carpet extraction machines use large quantities of water. New green alternatives are available that equally perform the cleaning task but do so while conserving water.

SUPPORTERS of GREEN CLEANING

The success of Green Cleaning in terms of creating healthier more productive indoor environments, reducing environmental impacts, and as a business strategy has resulted in numerous organizations supporting Green Cleaning. These organizations include:

■ FEDERAL, STATE AND LOCAL

GOVERNMENTS - federal agencies directed both by law (e.g. RCRA requires the use of products with recycled content) and Presidential Executive Order (e.g. E.O. 13101) are adopting Green Cleaning programs. States (e.g. New York, Massachusetts, and Pennsylvania) and cities (e.g. Chicago, Seattle and Santa Monica) have adopted purchasing strategies for Green Cleaning products.

■ US GREEN BUILDING COUNCIL (USGBC)

- an organization focused on reducing the environmental impacts of buildings through developing a series of rating systems (LEED - Leadership in Energy and Environmental Design). The USGBC is comprised of over 5,000 organizations including governments, private building owners, property managers, universities and schools, laboratories and more. Their green building rating systems have become the best recognized and most widely adopted standards for green buildings and their *LEED for Existing Buildings (LEED-EB)* rating system offers extensive opportunities for Green Cleaning. (www.usgbc.org)

■ HOSPITALS FOR A HEALTHY ENVIRONMENT (H2E)

- a healthcare partnership between a number of organizations including the American Hospitals Association, U.S. Environmental Protection Agency, Health Care Without Harm, and the American Nurses Association. H2E is focused on reducing the environmental impacts from the healthcare industry and their partners include the major hospital groups and group purchasing organizations. (www.h2e-online.org).

■ COLLABORATIVE FOR HIGH PERFORMANCE SCHOOLS (CHPS)

- the development of the CHPS *Maintenance and Operations Manual* helps schools identify cleaning product standards as well as the appropriate procedures to be used to create the most healthful and productive school environment. (www.chps.net)

■ SCHOOL ADVOCACY ORGANIZATIONS -

groups such as the Healthy Schools Campaign (www.healthyschoolscampaign.org) and the Center for Environment, Health and Justice (www.chej.org), while not directly employed by schools or the purchasing of cleaning products are becoming increasingly supportive of Green Cleaning and can be very influential due to their ability to mobilize community support and activism.

■ GREEN PURCHASING ORGANIZATIONS -

non-profit environmental groups such as the Center for a New American Dream have developed green purchasing programs primarily helping governmental entities including federal agencies, states and municipalities to help them easily implement green purchasing programs. Their newest effort is targeted at helping schools implement Green Cleaning programs. (www.newdream.org)

■ TRADE AND PROFESSIONAL ASSOCIATIONS

- due to the growing interest in Green Cleaning, professional organizations such as the International Facility Managers Association (IFMA), as well cleaning industry trade associations such as the International Sanitary Supply Association (ISSA) and the Building Services Contractors Association International (BSCAI) have begun offering educational programs at their annual conventions along with specific training on Green Cleaning for their members.

■ GREEN SEAL, INC. -

a non-profit organization that strives to achieve a healthy and cleaner environment. Green Seal, Inc. provides credible, objective, and unbiased information to direct the purchaser to environmentally responsible products and services. To earn the "Green Seal", a product must meet Green Seal's environmental standards and undergo rigorous testing and evaluation. (www.greenseal.org)

■ "GREEN" HOTELS ASSOCIATION® -

are properties whose managers are eager to institute programs that save water and energy as well as reduce solid waste. (www.greenhotels.com)



GREEN CLEANING is ESSENTIAL

Cleaning is an essential activity necessary to create healthy indoor environments. Today, the development of new chemicals, paper products and equipment has resulted in green products that perform as well, if not better than their traditional counterparts. At the same time these new technologies also reduce the potential impacts on product users, building occupants, and the environment.

Building owners and managers are adopting Green Cleaning at accelerating rates as these programs often can be implemented at an equal cost compared to traditional programs and can be one of the best

investments that can be made to improve worker productivity and performance. At the same time Green Cleaning is increasingly becoming either the requirement of mandated green programs or identified as the “best practice” in voluntary green programs. Plus, Green Cleaning offers numerous marketing, occupant satisfaction, and other advantages to building owners and managers in very competitive markets.

And with the development of Green Cleaning programs, it couldn't be easier. Green is not a “fad”, but is here to stay and is a win-win for everyone both for today and for the future.

Wausau Paper offers a Full-Line of Green Seal® Certified paper products



Towel & Tissue
Products

Bay West® EcoSoft™ Green Seal® towel and tissue products are made from 100% recycled wastepaper and are certified by Green Seal, Inc. in Washington, DC. The “Green Seal” means our products meet the Green Seal environmental standards for paper towels and tissue, making the EcoSoft™ Green Seal® products among the most environmentally preferable towel and tissue lines available in the away-from-home market.

To achieve and maintain the Green Seal certification, our towel and tissue products are continually subjected to rigorous evaluation and testing, along with a quality-control audit of our papermaking processes at our mill in Middletown, Ohio. Green Seal's environmental evaluation uses both qualitative and quantitative measures to ensure maximum product quality and performance, with minimal impact on the environment in manufacturing.

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