



# Change is in the Air

How Green Cleaning Protects the  
Environment *and* Health

AERAMAX<sup>®</sup>  
PROFESSIONAL



## MAKING A DIFFERENCE

In recent years, much more emphasis has been placed on creating **green cleaning** programs. Facility managers actively seek ways to not only diminish their facility's environmental footprint, but to improve occupant health and well-being through practices like removing toxic chemicals from cleaning supplies, improving cleaning regimens and **affecting indoor air quality** through the use of commercial-grade air purifiers.

By strict definition, a green cleaning program uses environmentally friendly products and processes, and helps maintain the health of occupants. In addition, a green cleaning program positively impacts the environment.

Green cleaning has long been championed in the residential/consumer sector, with a variety of companies touting solvents and cleaners that avoid volatile organic compounds (VOCs) and other toxic or harmful chemicals. Ideally, the products ingredients used wouldn't introduce toxic chemicals into the air—but products are only one component of true green cleaning.

In fact, some of the same manufacturers who produce so-called green products are often accused by advocates of "greenwashing," using environmental concern to portray themselves as environmentally-conscious, when actually the products aren't environmentally friendly from a production standpoint.

Likewise, some green cleaning products suffer from processes that aren't environmentally sound—or worse yet, claim green status simply because the packaging is biodegradable or recycled.

### True Green Cleaning Benefits:



People



Planet



Profit

That has led for a call for more transparency. "Many organizations and facilities will soon require chemical manufacturers to fully disclose what ingredients are in their products," said Steve Ashkin, Executive Director of the Green Cleaning Network. "This demand for greater ingredient transparency is impacting many industries...consumers and end customers not only want green cleaning products used in their facilities, but they also want to know what exactly is in those products.

Some may be green but may contain an ingredient that could be potentially harmful to children, for instance. School administrators want to know whether this ingredient is present before making a selection. We are going to continue to see more and more states pass regulations requiring green cleaning in schools and in public facilities they either own and operate or publicly fund."<sup>2</sup>

## GREEN CLEANING FOR HEALTH

Beyond the environmental aspects of green cleaning, there are also health aspects to consider when implementing a green program. Ignoring pollutants in the air and on surfaces can cause significant health concerns.

For example, research has concluded that VOCs in the air exacerbate allergies and asthma<sup>3</sup> and can cause dizziness, fatigue, nausea and impaired thinking. This makes cleaning the air and improving indoor air quality a priority.

Additionally, studies have shown a direct correlation between the chemicals used in conventional cleaning agents and increased incidences of bladder cancer among workers in occupations using typical cleaning solvents, like housekeeping personnel.<sup>4</sup>

Each year, **six billion** pounds of chemicals are used to clean commercial buildings; **3.5 million** cleaning employees are exposed to such chemicals while performing their duties.<sup>5</sup>



Each year, six billion pounds of chemicals are used to clean commercial buildings; 3.5 million cleaning employees are exposed to such chemicals while performing their duties.<sup>5</sup> Given these numbers, it's clear why more companies are considering the health aspects of a green cleaning program.

The issues of VOCs left behind in cleaning processes is particularly acute in areas where children may be present, making green cleaning a priority in the education sector.

"Why green cleaning has become more prevalent is quite straightforward," said Mark Bishop, Past Vice President of Policy for the Healthy Schools Campaign, an advocacy program for green cleaning. "The reality is there's a greater awareness of the need to support healthy students, there's a greater awareness of health schools and communities to provide environmental stewardship and there's a better understanding that green cleaning is very much a low hanging fruit—something that accomplishes the goals of supporting student health while improving the environment."

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## GREEN CLEANING FOR HEALTH

“The marketplace has caught up to the needs of green cleaning, the efficacy of cleaning products has improved and the cost is comparable—if not less expensive in many cases—for green cleaning.”

Additionally, previous obstacles—like cost to budget-conscious school districts dependent on public sources of revenue—have been eliminated with increased demand for green cleaning products.

“There was a time when green cleaning was synonymous with expensive chemicals that don’t work well...and the reality is that this has shifted,” Bishop said. “The marketplace has caught up to the needs of green cleaning, the efficacy of cleaning products has improved and the cost is comparable—if not less expensive in many cases—for green cleaning. The real focus now is not just about purchases, but how can we provide proper training and support for facility staff to do environmentally preferable cleaning practices. The confluence of environmental stewardship, the importance of health along with the maturity of the marketplace for green cleaning has allowed it to emerge as a priority issue.”



In just one school that implemented a **green cleaning practice** and a focus on **improving indoor air quality**, total illnesses were reduced by 24%, doctor visits among children were reduced by 34% and student absenteeism decreased by 46%.<sup>6</sup>

This is particularly true in industries with high-traffic contact, like health care, hospitality and education. And, the benefits are telling. For example, in just one school that implemented a green cleaning practice and a focus on improving indoor air quality, total illnesses were reduced by 24 percent, doctor visits among children were reduced by 34 percent and student absenteeism decreased by 46 percent.<sup>6</sup>

# A Green Checklist

Still, green cleaning involves more than just the chemicals used in the cleaning process. While the chemicals are a key component, a successful green cleaning program involves a critical look at:



## RAW MATERIALS ACQUISITION:

Are the raw materials used to create a green cleaning product renewable? Do they come from sustainably harvested sources? Do they include recyclable content?



## MANUFACTURING:

Is the product manufactured using less energy and water? Does the manufacturing plant have sustainable practices, with less waste and less emissions?



## PRODUCT:

Does the product reduce health concerns? Does it limit or eliminate volatile organic compounds (VOCs) in its makeup?



## PACKAGING:

Does the product require less packaging? Is the product concentrated, so there are more applications per package?



## DISTRIBUTION:

Does the manufacturer have to ship long-distances, or are there hubs from which a manufacturer ships, reducing carbon footprints?



## MAINTENANCE:

Does the product require extensive maintenance?



## REUSE:

Does the product allow for multiple uses per package? Can the product be reused? Can the product be recycled? Can its materials be reused?



## DISPOSAL:

Can the product be disposed of in environmentally friendly ways? Can all or most of the product be recycled? At the manufacturing point, do the processes reduce waste?<sup>7</sup>



## OPERATION:

Does the operation of the green cleaning product or equipment require less electricity or water? Does it require less workforce? From a manufacturing perspective, does the creation of the product require less energy?

# A PRESCRIPTION FOR GREEN SUCCESS

“The technology for cleaning a building twenty years ago is different than the technology we have today,”

For companies considering a switch to green cleaning, there are a number of appropriate steps for success.

## 1. Assess Facility Capabilities

Green cleaning isn't as simple as buying a green cleaning solvent and using it. By looking at the existing facility processes and practices, auditing cleaning needs and then matching those needs against the potential to change, facility managers can get a better sense of the undertaking. Part of the assessment should center around the type of equipment that is on hand, as well as any upgrades that are necessary.

In some instances, it's as simple as replacing traditional string mops with microfiber mops, which absorb more dirt and germs, spread less bacteria and provide for a quicker clean. But in some situations, this may involve the purchase of upgraded and energy efficient floor scrubbers, equipment that reduces water use during cleaning cycles or the installation of commercial-grade air purifiers. In the case of air purifiers, these systems can reduce workload by maintaining a virtually germ-free environment.

Additionally, a proper facility assessment needs to factor in the workforce and its ability to adapt to new cleaning regimens. This may require additional training resources.

“The technology for cleaning a building twenty years ago is different than the technology we have today,” Bishop said. “If we continue to clean our buildings as we had twenty years ago, we will not see the benefits of a green cleaning program. The greenest chemical can only be as green as you use it.”



## 2. Align Workforce

Once the initial audit is complete, a communications and training plan should be established for facilities personnel, as well as overall communications to the staff of the affected facility. That accelerates buy-in from all parties.

Key to this effort is education of purchasing or procurement agents, educating them on the types of products to scout. A good first step is consulting [greenseal.org](http://greenseal.org), an independent certifier of green products.

## ADAPTATION AND AWARENESS

### 3. Evaluate Practices

Then, adaptation of existing processes and practices will need to be considered. Because green cleaning is, by and large, more efficient than conventional methods (less water, more energy efficiency, quicker floor sweeps because of new equipment, quicker clean-ups because air purifiers are removing contaminants from indoor air, et al), facility managers might need to adapt workforce schedules and nightly routines.

“The real efficiencies that are happening now are the combination of using new products and new equipment that drive labor savings, allowing the existing workforce to work more efficiently—that’s where the real savings, and the real benefits for health, in these programs are realized,” Bishop said.

AeraMax® Professional can augment indoor air quality improvement efforts, using a sophisticated four-stage filtration systems that removes up to 99.97 percent of airborne pollutants, creating healthier and cleaner facilities.



The benefits to health cannot be overstated. For example, in one school alone, an indoor air quality program that focused on green cleaning techniques saw:

Targeted air purification is a valuable tool to improve indoor air quality and maintaining clean facilities. For example, AeraMax® Professional can augment indoor air quality improvement efforts, using a sophisticated four-stage filtration systems that removes up to 99.97 percent of airborne pollutants, creating healthier and cleaner facilities.

AeraMax Professional is designed to clean air in common areas with higher levels of contaminants, and is the first commercial-grade air purifier to be certified asthma and allergy friendly™ by the Asthma and Allergy Foundation of America. By integrating

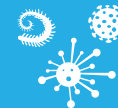
### By Implementing A Green Cleaning Program, One School Saw:



Airborne dust inside the building decrease by  
**52 percent**



VOC concentrations decrease by  
**49 percent**



Bacteria decrease by  
**40 percent**

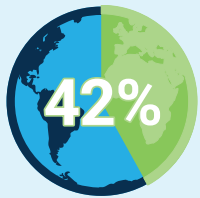


Fungi colony-forming units decrease by  
**61 percent<sup>8</sup>**

# GREEN CLEANING AND A NEW GENERATION

Environmental concerns in the workplace are ever-present these days. This consciousness raising is in part due to the growth of the Millennial Generation and its move into the workforce. Millennials, people born between 1981 and 2000, have surpassed the large generation of Baby Boomers in U.S. population<sup>9</sup> at 75.4 million, but don't carry the same motivations into the work world. Where previous generations looked to benefit and bonus packages as deciding factors whether or not to take a job, Millennials rate and rank companies along different criteria.

According to the consultancy Global Tolerance, 42 percent of the Millennial workforce want to work for a company that has a positive impact on the world.<sup>10</sup> And, 70 percent of Millennials say a company's social commitment—to communities, the environment and social causes—greatly influence a decision to take a job with said company.<sup>11</sup>



42% of Millennial workers want to work for a company that have a positive impact on the world



70% of Millennials say a company's social commitment—to communities, the environment and social causes—greatly influence a decision to take a job

This groundswell has caused companies to rethink their environmental stance, as well as their internal policies governing processes that impact the environment. And since the Millennials are poised to become the dominant workforce for the next generation, it's important the companies embrace a more progressive stance toward the environment. So, a green cleaning program can do more than positively impact the health of a facility's occupants—it can become a potential recruiting tool for engaged and committed workers.

For more information,  
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