

The Dangerous Cost of Ignoring Eco-Friendly Cleaning in Homes and Offices



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**Avanti
Green**
ECO CLEANING

Executive Summary

Healthier indoor environments are critical to human health. Such an environment can be maintained by using cleaning products that leave no harm and do the job. Though conventional cleaning products are effective they leave various health risks due to the use of toxic chemicals. The chemicals used in these products impact air quality and cause serious health concerns.

Children, elderly residents, and pets are more likely to be impacted by the chemicals used in the cleaning solutions. To protect residential places, non-hazardous eco-friendly products are necessary which avoid the common chemicals that cause irritation or breathing issues.

The commercial environments have more foot traffic, so the problem grows. They have to use heavy-duty cleaning products to keep it clean. The use of cleaning products cleans the floor and building but leaves harmful substances on the floor and in the air. Injuries to janitorial staff due to chemical spills are one of the highest recorded incidents. Green Seal-certified commercial cleaning services directly address these challenges through stringent standards and extensive staff training. They train their teams better, use safer products, and help reduce things like sick days and turnover. These products are truly eco-friendly and not just labeled that way.

This whitepaper explores the critical necessity of using certified eco-friendly cleaning companies, training the cleaning staff, and highlighting the benefits for residential health and commercial productivity. With the integration of non-toxic products, Green Seal certified-companies, and following modern automation technologies, homes, and workplaces can have better air quality and health outcomes.

Main Findings

- Hiring non-eco-friendly cleaning companies for homes and offices introduces harmful chemicals that linger on surfaces and release Volatile Organic Compounds (VOC), increasing disease and contamination risks in homes and offices.
- Volatile Organic Compounds (VOCs) from non eco-friendly cleaning companies pollute air, causing respiratory issues and chronic diseases.
- A non-eco-friendly cleaning company will most likely use these types of products, and instead of making your home clean and safe, it will introduce harmful toxins into your home or office.
- Non-eco-friendly cleaning is like fast food compared to organic, healthy food—convenient and cheap in the short term, but potentially harmful and unsustainable in the long run.
- Indoor air quality is up to 5x more polluted than outdoor air, exacerbated by toxic cleaning products.
- Conventional cleaners increase asthma risks by 50% and wheezing by 40%, with long-term impacts comparable to smoking 20 cigarettes/day.

- Green cleaning is growing at 11.2% annually in Clark County.
- The regional survey data indicates that 62% of the eco-friendly cleaning clients in Nevada fall into the category of children, pets, elderly people, and the ones sensitive to allergies and air pollution.
- 10% of U.S. poison control toxic exposures involve household cleaners; 4,000+ yearly pet poisoning cases reported by ASPCA.
- Consumer adoption of green cleaning products in the United States is increasing annually with a growth rate of 21%.
- Green Seal-certified products ensure safer cleaning for homes and workplaces, significantly reducing chemical exposure risks.
- Eco-friendly cleaning lowers respiratory issues, allergic reactions, and chemical irritants for children, elderly, and pets.
- Green cleaning in commercial settings reduces sick days (3-5 fewer annually) and increases employee productivity by 5%.
- Misconceptions about high green cleaning costs are debunked by long-term savings, reduced equipment wear, and fewer compliance issues.
- Green Seal-certified cleaning companies provide safer, non-toxic cleaning solutions, improved indoor air quality, and trained staff who follow stringent environmental and health standards, ensuring healthier homes and workplaces.
- The green cleaning market is projected to reach \$7.1 billion globally by 2032, driven by increasing regulatory pressures and consumer demand.
- Future innovations, including enzyme-based cleaners and nanotechnology, promise safer, more effective, and sustainable cleaning solutions.
- Transitioning to eco-friendly cleaning ensures healthier homes, safer workplaces, environmental protection, and regulatory compliance.

1. Eco-Friendly Cleaning for Residential Spaces

1.1 The Importance of Healthy Homes

Introduction

According to EPA Indoor Air Quality Reports, indoor air quality is up to 5x more polluted than outdoor air quality. Since most of the time is spent indoors, it increases the risk of exposure. Poor air quality causes health problems like respiratory health, allergies, chronic conditions, and others. Chemical-based cleaning products are one of the main contributing factors to polluting the air quality. Healthier indoor air quality is linked to overall health.

The Dangers of Conventional Household Cleaners

According to the statistics provided by Green Seal, lung function impact is like smoking 20 cigarettes/day, increased risk of asthma symptoms by 50%, wheezing by 40%, and physician-diagnosed asthma by 100%.

Household cleaner use contributes substantially to indoor pollution. The cleaning products use chemicals like ammonia, chlorine, phthalates, etc. Incidents regarding the use of hazardous cleaning products are on the rise. A non-eco-friendly cleaning company will most likely use these types of products, and instead of making your home clean and safe, it will introduce harmful toxins into your home or office.

The Bureau of Labor Statistics recorded **approximately 61,000 non-fatal injuries among janitorial workers in 2020**, a rate of about 2.8 injuries per 100 workers – significantly higher than the average across all industries.

Report by Cleaning

10% of all toxic exposures reported to U.S. poison control involve household cleaning substances. ASPCA receives 4,000+ cleaning product-related calls per year including accidental poisoning to pets. Additionally, these chemical cleaners pollute air quality. The in-house used chemical-based VOCs (Volatile Organic Compounds) include, but are not limited to:

- Aerosol spray products, including health, beauty, and cleaning products
- Air fresheners
- Chlorine bleach
- Detergent and dishwashing liquid
- Dry cleaning chemicals
- Rug and upholstery cleaners
- Furniture and floor polish
- Oven cleaners

Lung Org advises never to mix bleach or any bleach-containing product with any cleaner containing ammonia as the gases released from this mixture can lead to severe breathing problems and even fatality.

Even if they don't, long-term exposure can lead to health challenges like asthma and chronic respiratory diseases. Some cleaners are neutral, however, after mixing, they release hazardous gases like chlorine. After cleaning, these chemicals are released into the air and cause immediate breathing issues and irritation.

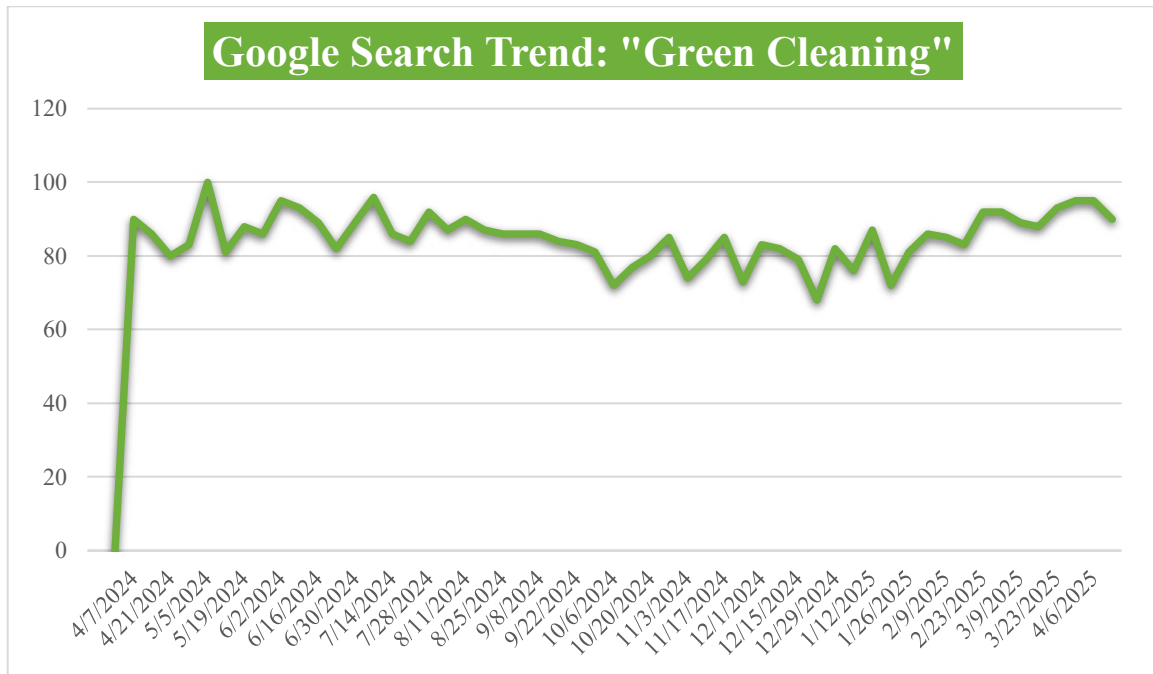
Benefits of Non-Toxic Residential Cleaning

Non-toxic residential cleaning has several health benefits. Natural cleaners are made from ingredients like vinegar, baking soda, and hydrogen peroxide which are not harmful to human health. Eco-friendly cleaning offers the following benefits:

- Significantly reduces exposure to toxic chemicals and irritants
- Safer environment for children, elderly, and pets
- Lowers risk of respiratory issues and allergic reactions
- No harmful chemical residues left on surfaces
- Improved indoor air quality, reduced indoor pollution
- Biodegradable, reduces environmental impact, safer waterways
- Prevents dangerous chemical reactions during cleaning
- Reduces skin irritation, safer for sensitive individuals

Consumer Demand and Las Vegas and Henderson Nevada Market Trends

Green cleaning is growing at 11.2% annually in Clark County. According to Airbnb and local property managers, the demand for eco-friendly cleaning with short-term rentals is also growing. The regional survey data indicates that 62% of the eco-friendly cleaning clients in Nevada fall into the category of children, pets, elderly people, and the ones sensitive to allergies and air pollution.



Google Search Trend also shows an increase in the search volume of terms related to “Green Cleaning.” This indicates growing increased awareness about the hazards of traditional cleaning methods and the transition to eco-friendly cleaning.

Consumer Readiness & Green Product Adoption

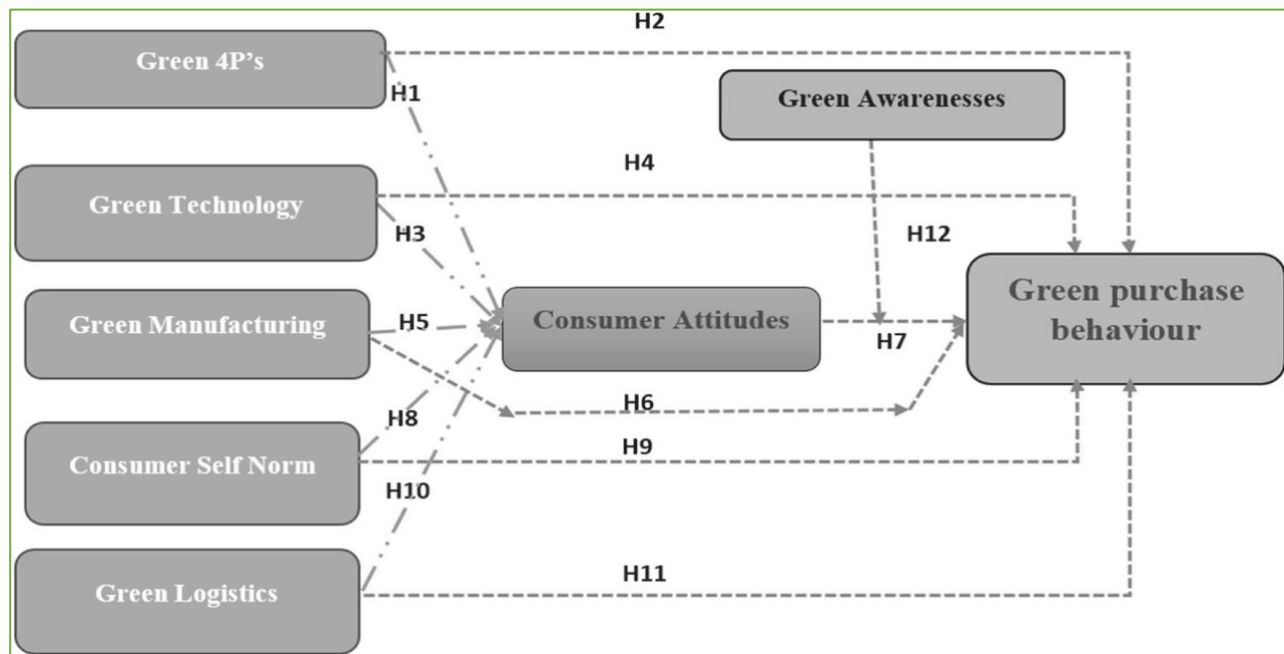
Consumer adoption of green cleaning products in the United States is increasing annually with a growth rate of 21%. The double-digit growth is far more than the growth of the entire cleaning industry in the region. Due to consumer preference for sustainable cleaning solutions, the green cleaning industry is rising every year.



“73% of U.S. consumers say they would pay more for green-certified home services.”

(Nielsen Sustainability Report)

“Non-toxic” and “fragrance-free” are the top searched terms when buying the cleaning products. Green cleaning products use ingredients like vinegar and baking which are multipurpose and act as effective cleaning agents. Lemon juice is a good alternative to bleach and acts as a natural disinfectant. Hydrogen peroxide is 3% effective against bacteria and viruses and causes no harmful fumes.



*Consumer readiness for green consumption: **SOURCE***

Consumers tend to pick products with clear eco-friendly labels and trust recognized certifications like Green Seal. This encourages responsible consumption and green practices to protect their health and environmental consciousness.

2. Eco-Friendly Cleaning for Commercial Spaces

2.1 Business Case for Green Cleaning

Commercial buildings like offices, schools, hospitals, and hotels face the same toxic trade-offs as homes, but on a larger scale. The indoor air quality drops to 2-5 times worse than the outdoor air quality as the chemicals used in the cleaning products are released into the air. This section focuses on the need for green cleaning products in the commercial setup and its importance in maintaining a healthy environment and increasing productivity. As a shift in policy certification and corporate adoption, government agencies, schools, and large corporations are mandating eco-friendly cleaning in their facilities.

The Impact of Conventional Cleaning on Office Environments:

“Each employer shall furnish to each of his employees’ employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees.”

General Duty Clause from the Occupational Safety and Health (OSH) Act of 1970 USA (Public Law 91-596).

Using sustainable cleaning products is no longer an option but a regulatory requirement protected by OSHA and standards like LEED (Leadership in Energy and Environmental Design) in the United States of America. The world has moved from the philanthropic act of green cleaning to a core business priority. In many jurisdictions, including the United States, maintaining safe indoor environments is the baseline expectation. It’s the legal and ethical obligation of employers to protect workers from exposure to harmful substances including cleaning chemicals.

Daily exposure to traditional cleaning chemicals causes a 43% decline in lung function over 20 years and a 50% increase in asthma medication usage among daily spray cleaner users, according to a study by the University of Bergen.

The janitor staff responsible for cleaning is exposed to the concentrated cleaning chemicals as they are on the front line. Commercial cleaning requires the use of effective cleaning products and many of these cleaning products emit volatile organic compounds (VOCs) which can pollute the breathable air. Poorly ventilated areas such as restrooms or poorly ventilated storage closets can add to these risks.

Cleanliness, ventilation, air quality, and overall workspace environment are the responsibility of the employers. Such an environment ensures sustainable working conditions, health and safety of the workers, reduced sick days, and increased productivity.

Benefits of Eco-Friendly Commercial Cleaning

Eco-Friendly Commercial Cleaning contributes to protecting the health of the occupants. Using non-toxic, low-VOC, no carcinogens cleaning solutions improves the air quality and surface for the employees and customers. According to data provided by Green Seal, workers in green buildings tend to take 3-5 less sick leaves, and their productivity is increased by over 5% per year.

Green Seal-certified products are preventing the disposal of 1.7 billion plastic containers per year.

Waste reduction is another contribution to the environment. Moreover, using green cleaning products not only increases the productivity and sustainability of commercial setups but also enhances their reputation and compliance with regulatory requirements.

The Green Seal Advantage in Commercial Settings

Indoor air pollution ranked among the top five environmental health risks in the U.S.

U.S. Environmental Protection Agency 2022.

The purpose of shifting from the use of chemicals to natural cleaning solutions is health, sustainability, and environmental challenges. Therefore, it is necessary to verify if a certain cleaning product is truly Eco-friendly or just labeled that way.

77% of facilities are taking active steps to incorporate green-certified cleaning products into their programs.

Green Seal certification GS-42, a third-party standard for Commercial & Institutional Cleaning Services, can help businesses pick a truly effective non-toxic cleaning program. Key features of GS-42, Green Seal certification include:

- Using only approved environmentally preferable products
- Implementing site-specific cleaning plans
- Mandating ongoing staff education.

Upon hiring all cleaning staff receive at least 12 hours of initial training focused on safe and effective handling of the cleaning products, their use and maintenance, and the use of cleaning equipment. The safety training is focused on reducing and preventing injuries due to exposure to hazardous materials, proper use of protective equipment, and disposal of leftover cleaning products.

"Green Seal certified companies are among the most highly trained cleaning teams in the nation, expertly using healthier cleaning products and practices that actively improve indoor air quality and the health and productivity of building occupants. Importantly, these products and practices also protect custodial staff, who in general are twice as likely to experience occupational asthma compared to other workers."

- Taryn Tuss, Senior Vice President of Marketing and Communications,
Green Seal

Cost-Effectiveness and Long-Term Savings

It is a common misconception that green products are more expensive and less effective.

The use of traditional chemicals for cleaning exposes businesses to increased risk of health issues, incidents of chemical spills, increased sick leaves, and compensation claims in case of serious accidents. Securing Green Seal certification might inflate the costs in the short term, but it offers long-term relief. Increased productivity, enhanced reputation with eco-label, and healthier employees outweigh these initial costs.

Using green cleaning products causes less wear and tear to the cleaning equipment and reduces the overall cost. Also, using these products reduces incidents like chemical spills, indoor air incidents, or OSHA violations.

3. Bridging the Gap and Looking Forward

3.1 Common Challenges and Solutions

Addressing Misconceptions

Eco-friendly cleaning products are cost-effective and equally efficient. It's a common misconception that green products are weaker compared to modern chemical-based cleaners. Though the initial cost of green products is comparatively higher, the long-term savings and working efficiency can make up for these costs. Less wear and tear, less product waste, and no regulatory liabilities: green products

work on many fronts. Ensuring safety and without compromising on cleanliness, green cleaning delivers in both homes and workplaces.

Implementation Strategies

Green cleaning is implemented mainly for three reasons: better air quality and a healthy living environment and trusted eco-friendly labels for businesses for a better reputation. Therefore, it is important to select a certified eco-friendly partner to avoid “greenwashed” options.

Partnering with a trusted label like Green Seal ensures high standards, results, and sustainability. Green Seal’s GS-42 certification minimizes waste and offers site-specific procedures, janitor staff training, and recommendations for low-toxicity products. With proven “green” claims, Green Seal saves businesses costly trial and error by offering industry-standard cleaning tools training, and products.

Shifting to non-toxic green cleaning can be done in practical steps, starting with auditing the current cleaning chemicals and replacing them with less dangerous alternatives. Adopt Green Seal recommended products and train the janitorial team on their proper use dilution. Introduce microfiber systems and proper ventilation in the residential and commercial setups.

By gradually integrating green products, companies can modernize their cleaning routine for maximum benefits.

The Future of Eco-Friendly Cleaning

The demand for green cleaning services in the U.S. is witnessing significant growth as consumers grow increasingly aware of the negative health and environmental effects associated with chemical-based cleaning products. This shift in preference is supported by a broad cultural trend toward sustainability and healthier living, which has led to projections that the global green cleaning market will hit \$7.1 billion by 2032. Locally, U.S. businesses are feeling this change as eco-conscious behavior takes root across industries.

From a business perspective, green cleaning represents a unique opportunity to tap into a growing market segment that prioritizes environmentally friendly solutions. Many consumers are now willing to pay a premium for services that align with their values, particularly when it comes to maintaining healthier homes and workspaces. For businesses, adopting green cleaning practices is no longer just a value-added feature; it’s an essential differentiator in a competitive market.

Furthermore, regulatory and corporate pressures are pushing organizations across industries toward sustainable operations. Large enterprises, particularly in commercial and office settings, are seeking environmentally certified cleaning services to meet internal sustainability goals, comply with emerging green regulations, and improve their brand image. Partnering with certified green cleaning providers not only allows businesses to appeal to this growing consumer group but also enhances their own reputation in prioritizing health and sustainability.



The world is shifting towards sustainability. Green product manufacturers are developing advanced formulations to make clean products that are more environmentally friendly. These products use ingredients like enzymes-based cleaners as they can break down the organic matter more effectively and remove stubborn stains and bad odors.

The use of AI and nanotechnology in the future for green cleaning is inevitable as it can offer cleaning automation, waste management and reduction, and the use of nanoparticles to remove dust and grime. Without using chemicals in the process, this can revolutionize commercial cleaning.

Green cleaning has become a regulatory necessity, an ethical responsibility, and a must-have to protect human health and the environment. Therefore, now is the time to adopt eco-friendly cleaning practices for your homes and commercial settings for a sustainable future.

Conclusion

Non-eco-friendly cleaning practices pose significant risks to both health and the environment. Conventional cleaning products often contain harmful chemicals that linger on surfaces and release Volatile Organic Compounds (VOCs) into the air, which can worsen indoor air quality. Shockingly, indoor air can be up to five times more polluted than outdoor air, largely due to these toxic cleaners. Exposure to VOCs has been linked to respiratory issues, chronic diseases, and elevated risks of asthma, with studies showing conventional cleaners increase asthma risks by 50% and wheezing by 40%. The long-term health effects are alarming and comparable to smoking 20 cigarettes a day. Additionally, these same products cause over 10% of toxic exposures reported to U.S. poison control centers, with 4,000+ annual pet poisoning cases alone.

On the other hand, the shift to green cleaning offers a healthier, safer alternative, especially for vulnerable groups such as children, the elderly, and people with allergies. Eco-friendly cleaning products, like those certified by Green Seal, drastically reduce chemical exposure, improving air quality and lowering respiratory and allergy-related issues. In Nevada, 62% of eco-friendly cleaning clients belong to households with children, pets, or elderly individuals, showcasing the growing demand for safe cleaning options. For businesses, green cleaning reduces sick days by 3-5 annually and boosts employee productivity by 5%, proving its value for workplace health. Consumer adoption of green cleaning products in the U.S. is increasing at an impressive rate of 21% annually, highlighting the widespread shift toward sustainability.

From an economic and regulatory standpoint, transitioning to eco-friendly cleaning is a smart investment. While green products may seem costlier upfront, they offer long-term savings through reduced equipment wear, fewer compliance issues, and healthier work environments. Misconceptions about high costs are quickly debunked when factoring in these benefits. Additionally, the global green cleaning market is projected to reach \$7.1 billion by 2032, driven by consumer demand and regulatory pressures. Innovations like enzyme-based cleaners and nanotechnology promise even more effective and sustainable solutions in the future. By adopting green cleaning, individuals and businesses not only ensure better health and environmental protection but also align with emerging regulations and consumer preferences for a competitive edge in the marketplace. The shift to eco-friendly cleaning is not just a preference but a necessity for long-term health, sustainability, and peace of mind.

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