

Cleaning Maintenance Magazine

Green Beyond Cleaning

By Mike Sawchuk



When members of the cleaning industry read about Green issues, they invariably focus on Green cleaning and the use of environmentally preferable cleaning products. However, stepping back and looking at the bigger picture, we find that virtually the entire indoor environment is going Green – from the building materials used to construct the facilities we clean

to the actual floors, counters, desks, and other surfaces we maintain.

For instance, since September 2006, carpeting installed in California buildings is required to be “high-performance” and meet a variety of environmental standards, covering indoor air quality, hazardous material content, VOC (volatile organic compounds) content, recycled and bio-based content, and several other criteria that help protect the environment. And because California buys more than 12 million square feet of carpet every year—enough to cover nearly 50 miles of a four-lane highway—several carpet manufacturers have developed carpets that meet the state’s new Green standards.

Conventional carpeting is just one example of how a product used in the facilities we clean can adversely affect our

environment—and why Green standards and substitutes are being demanded and developed. Virtually all building materials, in one way or another, have the potential of negatively impacting the environment.

Again using carpeting as a case in point, some studies have estimated that the carpet industry produces more than 3.5 billion tons of gasses each year that contribute to global warming. Additionally, billions of gallons of petroleum, as well as other natural, non-sustainable resources, are used each year to produce carpeting. And once old or discarded carpet is removed from a facility, it is very unlikely to be recycled. In fact, in California currently more than 95 percent of the discarded carpet ends up in crowded and diminishing landfills.

Building service contractors (BSCs) need to be aware of how the entire building “envelope” – from carpets and floors, to walls and desktops – is going Green. They should be knowledgeable of this, if for no other reason than the fact that they will be called upon to clean and maintain these new environmentally preferable indoor surfaces. And some may necessitate slightly different cleaning requirements than their conventional counterparts. As more and more of the facilities BSCs clean are built and operated in an environmentally responsible manner, we begin to realize just how vital the BSCs’ role becomes in keeping these Green-built facilities safe and environmentally healthy by using Green-certified cleaning products.

What is a Green Building?

According to the U.S. Environmental Protection Agency, a Green building has been “purposefully designed to reduce both the direct and indirect [negative] environmental consequences of its construction.” This includes

incorporating environmentally preferable surfaces, like the carpets discussed earlier, along with other building materials and furnishings, and the entire operation of the facility, including its possible or eventual decommissioning—if and when the building is actually torn down.

The complete process of building a Green facility begins with the developers and planners in the early planning stages. Once the decision to “build-Green” has been reached, every component – from choosing the architects and construction companies to build the property, to its actual design and products – are selected based on their ability to contribute to the creation of a totally environmentally preferable and responsible building. The key word here is “contribute,” for as we know, no chain is stronger than its weakest link. Mixing environmentally preferable products with conventional products, materials, and building practices can seriously weaken the environmental goals of the entire project.

Other components of a Green building include:

- **The construction site itself.** After World War II, Americans left central cities in droves to seek suburban housing and open spaces. In those days, gasoline was cheap, commute times were often relatively short, and there was little concern about how urban sprawl would affect our environment. However, today, the most ideal site for new construction is in what is referred to as a “brownfield,” and we are seeing more and more of these in cities throughout North America. A brownfield is an abandoned, or underused, industrial or warehouse area that is finding new life as a commercial and residential setting, usually combined. With more and more people moving back to central cities, public

transportation is often already available to these brownfield developments, eliminating the need for cars and ending urban sprawl.

- **Water and energy conservation.** Until 1972, the North American building industry paid little heed to conservation measures. However, that year everything changed with the first oil embargo. Architects and planners began designing air-tight buildings that would use energy more efficiently. Today, a Green building may start at the top, with a Green roof installed to help insulate the facility and minimize the impact of storm water runoff, as well as photovoltaic panels to limit the amount of energy the building needs from the power grid. Florescent and/or low voltage lighting are now commonplace. Low-flow restroom fixtures, including waterless urinals, are as routine today as systems that re-circulate “graywater,” which is used water that is safe to use in landscaping and cooling.
- **Recycled materials.** Along with environmentally preferable building materials, a Green building uses as many recycled materials as possible. When Stapleton International Airport in Denver, CO closed in the late 1990s, a major mega-retailer recycled the concrete, asphalt, and building materials from the old facility to construct a new store. Referred to as “the world’s largest recycling project,” more than 6.5 million tons of materials were recycled to be used for the store, or sold for other construction purposes.
- **Products that help protect indoor air quality.** As discussed earlier, one of the big concerns about conventional carpeting is the off-gassing and the release of VOCs into the air during and after

construction. Carpets, as mentioned previously, are not the only materials that may have high VOC levels. Paints, flooring, glues, adhesives, wood preservatives, and scores of other building materials also have high VOC contents, as well as other ingredients that can harm indoor air quality. Materials that are selected for Green buildings eliminate, or at least minimize, the use of these products.

The Cleaning Connection

Although our goal here is to see how the facilities we maintain are going Green beyond just the use of environmentally preferable cleaning products, it cannot be denied that Green cleaning is a fundamental part of a Green building. And nothing points this out more dramatically than studies by Greg Norris, a professor at Harvard University's School of Public Health.

According to Norris, all the environmental benefits of installing an environmentally responsible, low-VOC hard-surface flooring disappear the first time the floor is cared for using conventional floor care chemicals and finishes. According to Norris, "the amount of VOCs from a single waxing of a floor can equal or exceed the VOCs emitted from the flooring materials over the [entire] lifespan of these flooring materials."

It seems that every time the construction of a new building is announced, the developers are eager to point out how Green and environmentally responsible the facility will be. Along with their announcements, we often hear about new technologies that will make these facilities Greener and more efficient. This is all good, but along with the hoopla, we must never forget how critical our role is in keeping these facilities

Green and healthy. Indeed, as referenced earlier, in many ways we are the crucial link that keeps these facilities Green.