Bill Thompson, Director of Facilities for Lockport Township High School in Illinois, first considered starting a green cleaning program after his janitors became dizzy when using a traditional chemical floor stripper.

“I’ve seen the negative health effects of traditional cleaning chemicals first-hand, and I can tell you there’s a better way,” said Thompson. Thompson began implementing a green cleaning program in 2003 and now sees benefits in student attendance as well as cost savings for his school. “Green cleaning is the right thing to do, not only for children but for the custodial staff who work with the chemicals.”

Thompson started introducing green products gradually at Lockport Township High, and now almost all of the cleaning agents used at the school are environmentally friendly. The school has become a model for successful green cleaning program implementation and Thompson has worked to spread the word about green cleaning. “Green cleaning really is a simple but very important way to protect the health of everyone who passes through your school’s doors,” Thompson said.

Developing and implementing a green cleaning program does not have to be overwhelming or expensive. It is a process that can be accomplished in steps or phases, with positive results at each stage. Here are five simple steps schools can use to develop and implement a green cleaning program.

**STEP 1: DEVELOP A GREEN CLEANING PROGRAM**

Schools that successfully implement green cleaning programs usually begin by addressing the most significant or easily accessible issues. As they experience success, schools often add new elements or make adjustments to the plan to improve the results of current efforts.

Mervin Brewer, assistant custodial supervisor of Salt Lake City School District, described the process by which he started and developed a green cleaning program: “Over the past few years, the Salt Lake City School District Custodial Department conducted pilot tests of green cleaning products at several schools to evaluate their effectiveness. As a result, we have not only changed the chemicals used in our schools, but the cleaning and maintenance processes as well. We have formed an oversight committee, assessed needed changes, set goals, developed a timeframe, and systematically implemented green cleaning processes and adopted greener chemicals, paper, and other products and equipment.

“By phasing out products and methods that were inefficient and updating our processes,
we have been able to accomplish our goals with no increase to the custodial budget."

Green cleaning plans should include strategies that address the following:

**Prevention**

Cleaning is just one part of a healthy school. Most green cleaning plans include strategies to reduce cleaning requirements by preventing the introduction of dirt and other contaminants into the school in the first place. This ranges from solutions as simple as adding appropriately sized entryway mats that can stop up to 85 percent of the dirt from entering the building, to more complex solutions that include the addition of breezeways or covered entrance points.

Cleaning crews can avoid exposure to harmful chemicals by wearing the right protective gear and paying attention to the ways cleaning chemicals affect indoor air quality.

Providing education about everyone’s role in preventing the spread of germs is also key; for example, the green cleaning team can work with school nurses and administrators to encourage students and staff to stay home from school when they are ill, preventing the spread of germs to others at school.

**Conservation**

Conservation is an essential component of a green cleaning program. There are plenty of opportunities to use less energy, water, and chemicals while still cleaning to the highest standards.

At a minimum, schools should aim to be toxics-free while using resources sustainably. Sustainability means that we can meet the need for clean classrooms today while ensuring that future generations of children get to enjoy our planet as we do today.

Schools may also decide to take a holistic look at other human health and environment issues. For example, bringing more locally grown, fresh, and healthy foods to the cafeteria may foster both better student health and sustainability.

**Education**

Schools play a prominent role in the life of the community and the policies on campus can generate extensive community dialogue. When schools adopt sustainability initiatives such as energy efficiency and green cleaning programs, they do more than save resources and protect children’s health—they stimulate community-wide discussion about these issues.

Because of schools’ important community role, parents and other stakeholders should understand why green cleaning is beneficial. Staff should be trained to use the right cleaning products and the correct cleaning procedures. This will minimize the use of and exposure to hazardous chemicals.

Schools that use sustainable practices also tend to incorporate them into student learning, educating future generations about environmental responsibility. Emerging evidence documents the value of healthy, environmentally responsible schools to student and teacher performance. In 2006, the National Research Council of the National Academies released *Green Schools: Attributes for Health and Learning*. This report found that environmental factors such as indoor air quality support student and teacher health, learning, and productivity.

**Evaluation**

In addition to establishing a green cleaning team and implementing policies and procedures to establish a green cleaning program, ongoing evalua-
tion is a critical component of establishing a green cleaning program.

Pat Pizzo, Director of Facilities and Operations at East Meadow Union Free School District in New York, reflected on his commitment to evaluating his green cleaning program. “Evaluation of the district’s green cleaning program is comprehensive and ongoing. Regardless of cost, the district will discontinue using any product that does not meet the high cleaning standards of the district. The Facilities Department maintains a database of all products used in the district, and the green cleaning committee continually assesses the effectiveness of all new products. Head custodians are invited to discuss any issues they have with products at monthly meetings.”

**STEP 2: USE GREEN CLEANING PRODUCTS**

A few years ago, buying green cleaning products was not easy. Many early green products either did not perform as well as their traditional counterparts or were significantly more expensive. There were no agreed upon standards for what constituted a “green” product and there were, unfortunately, many spurious claims.

Since then, standards have evolved that take the guesswork out of identifying and evaluating products that have reduced health and environmental impacts. Using these standards makes purchasing green cleaning products quick and easy—and provides a level of confidence that the products meet state-of-the-art performance, health, safety, and environmental standards.

**Standards**

Third-party organizations such as Green Seal, EcoLogo, and the EPA’s Design for the Environment program have created standards that currently apply to the majority of green cleaning products used in schools.

In 2003, Blackhawk Intermediate School in Beaver Falls, PA volunteered to test Green Seal-certified products recommended by several janitorial product distributors. After several months of testing the products, a favorable review was given and Blackhawk switched from traditional cleaning chemicals to all Green Seal-certified products for their everyday cleaning. Andi Lee-Marnicio, Head Custodian at Blackhawk Intermediate School said “the goal of Blackhawk Intermediate School is to provide students, staff, and the public with the most healthful, most environmentally friendly building in which to work, learn, and play. Our green cleaning program is an important part of achieving this goal.”

**Cost Comparison**

Switching to green cleaning chemicals is considered “cost neutral” when compared to other high-quality traditional cleaning options. Schools that use green products often end up using fewer chemicals to complete normal cleaning tasks, thus reducing the overall number of products used in the cleaning program.

“A comprehensive approach to green cleaning can achieve cost savings, while maintaining a safe and clean environment. The efficient use of green products and equipment that reduces or eliminates the need for cleaning chemicals has enabled our district to realize substantial savings while simultaneously reducing its impact on the environment and children’s health,” Pizzo said.

Unlike the purchase of most school products (such as furniture, arts and crafts supplies, textbooks, writing paper, etc.), the successful use of cleaning supplies is highly labor-dependent (labor represents around 80-90 percent of the cleaning budget, while cleaning supplies represent less than 10 percent). With proper training, a green cleaning program can produce large savings in labor.

To build a successful green cleaning program at Newport News Public Schools in Virginia, Executive Director of Plant Services Keith Webb hired a trainer to provide effective, efficient, and consistent training to the entire staff of custodians.

“The trainer infused the green mentality into our daily operations,” Webb explained. “We created a ‘Sustainable Cleaning’ handbook, became certified trainers, and began to systematically train custodians. In an effort to promote professionalism within the frontline managers, we enrolled all building lead custodians in management training to give this group the basics on what it means and how to be a manager.”

**STEP 3: INTRODUCE GREEN EQUIPMENT AND SUPPLIES**

Equipment selection is a huge part of a green cleaning program. Today’s tools can reduce chemical use and increase productivity. Improvements in ergonomics should also help custodians avoid injuries from repetitive strains. So although green equipment may initially cost slightly more than traditional options, schools can actually save money in labor and healthcare costs in the long run by investing in green equipment technologies.
Green equipment and supplies can also reduce exposure to dust and chemicals while cutting energy and water use. Some examples include:

- vacuum cleaners with high-efficiency filters that capture microscopic materials that can harm health or damage sensitive equipment;
- floor burnishers with vacuum attachments that capture the dust created during use, thus protecting users and students from exposure to heavy metals;
- auto scrubbers and carpet extractors that reduce water consumption and chemical use and can also reduce the potential for slip-and-fall accidents and mold growth; and
- high-quality entryway mats that reduce dirt contaminations.

Rock Whitney, Director of Custodial Services at North East Independent School District, TX reflected on the important role equipment plays in his green cleaning program in San Antonio. “While our green cleaning program purchases Green Seal-certified products, the implementation of the program required looking at everything involved in cleaning school buildings, down to the rags being used. First, the green cleaning program replaces obsolete equipment with new technology that uses 70 percent less water and chemicals,” he said.

“For example, deep extraction carpet cleaning replaced bonnet cleaning which caused a large amount of airborne particles that impacted the health of staff and students. All carpet vacuums were replaced with dual motor HEPA-grade filtration to further prevent the release of fine particles into the classroom air. After the new equipment had been implemented, we documented a ten-fold decrease in the number of airborne contaminants that are known to cause asthma.”

**Cost Comparison**

Investing in green equipment should increase the productivity of cleaning crews. Since labor constitutes the largest component of a school’s cleaning budget, investing in the right equipment and developing effective cleaning procedures is the greatest opportunity for cost savings.

Green equipment tends to cost more, but with its higher quality and greater durability, it can be more cost-effective in the long run. In most cases, the budget won’t permit a school to replace all inappropriate equipment at once. By analyzing a school’s needs based on the criteria outlined above, schools can identify priorities and establish a plan for phasing out lower-quality, poorly performing equipment.

**STEP 4: ADOPT GREEN CLEANING PROCEDURES**

Green cleaning is not a “one size fits all” proposition. Which cleaning procedures a school decides to add or change will depend on individual conditions and priorities in a school. Changes in the frequency, technique, or time when cleaning is performed can be as important to a green cleaning program as the products and equipment being used.

**Types of Procedures**

Typically, green cleaning procedures fall into three broad categories: those that reduce general health impacts, those that accommodate populations with special needs and those that reduce environmental impacts.

**Reducing General Health Impacts**

District custodial staff at Columbia Public School District in Missouri focus on protecting the health of staff and students by implementing specific procedures for cleaning high-touch points, such as student desks and tables, door knobs and push plates, hand rails, and drinking fountains. In addition, district staff work closely with the district nursing coordinator to stress the importance of proper hand washing.

Mike Jones, the district’s assistant director of Custodial Services said, “With the installation of green paper towels, tissues, and soap, I met with teachers and nurses to explain our new products, stressing the importance of proper hand washing using only the necessary soap and paper. We also discussed the need for staff to work with students to provide hygiene education and educate students about being environmentally responsible.”

**Accommodating Populations with Special Needs**

The green cleaning program at Green Chimneys School in Brewster, N.Y. serves more than 200 students, most with emotional, learning, and social challenges. The school includes classrooms, restrooms, a farm, a horse barn, and an organic garden. To accommodate the unique population served by Green Chimneys, Housekeeping Manager Deb Stafford implemented a number of procedures to guarantee...
their program protects the health of the students and supports the school’s strong emphasis on environmental stewardship.

“The nature of our school and the building specific requirements necessitated creating an effective green cleaning environment,” she said. “By using a few green cleaning strategies, Green Chimneys has implemented safer and more efficient cleaning procedures and the housekeeping supplies budget has decreased 17 percent over three years.”

Reducing Environmental Impacts

Adopting Integrated Pest Management (IPM) is an excellent way to reduce the impact of a school’s cleaning program on the environment. IPM focuses on eliminating the sources that attract the pests in the first place and helps reduce or eliminate the need for toxic pesticides by sealing cracks, repairing screens, adding barriers, and making other improvements that keep pests out of the building.

“We implemented an Integrated Pest Management program in 2005 that has achieved equal or better results in controlling pests as traditional chemical-based means, but in a healthier and safer way,” Salt Lake City School District’s Mervin Brewer said. “We have reduced our pest management costs by 75 percent and, since 2006, only 12 targeted pesticide applications have occurred in our schools with no increase in pest activity. Head custodians receive quarterly IPM training and function as IPM site coordinators. Although not required, our custodial supervisors are licensed by the state as pesticide applicators.”

Including a recycling program in a school green cleaning program can also help reduce reliance on virgin materials, lower overall impacts on animal habitats and landfills, and increase the value of recyclables by recycling and purchasing recycled materials. Many schools have found they can significantly reduce trash disposal costs as well.

STEP 5: SHARE THE RESPONSIBILITY

Cleanliness, health, and safety are not the sole responsibility of the custodians. Everyone who uses the building, including the students, teachers, administrators, and even unions and outside contractors should play a role in maintaining a healthy environment. It is critical to educate custodial staff, administrators, teachers, students, union representatives, vendors, and visitors about what they can do to promote a healthy school environment, such as recycling paper and plastic, conserving water, maintaining uncluttered classrooms and work spaces, and handling food and potential contaminants properly.

Implementation of green cleaning programs in schools throughout the

cont’d on page 44
time is spent on a skill and not content. You don’t get depth without having a problem to solve. I think that if I, as a student, have to figure things out, it makes me an independent learner.

I think these points bring us back to what you were talking about earlier—silos. It’s about teaching these subjects within the context of a bigger picture, but something new is always coming up so it’s become like whack-a-mole.

That’s a perfect metaphor.
I think we have a better world—and initiatives like green cleaning are helping to make it that way—but we also have to be real and admit that we have a long way to go, especially in our older urban communities. We can’t do anything about the facilities we have that are aging and crumbling. You can have all these regulations, but if you don’t have the economic where-withal or the fiscal policies in place to reshape, replace, recycle the quality, what are you doing?

Cont’d from page 17 State Governments…

Given the dearth of action at the state level, this is an opportune time for school districts to move forward and implement green cleaning programs locally within their respective facilities. Guidelines issued by states such as Illinois, Missouri, and New York in support of their respective green cleaning for schools laws serve as a wonderful “roadmap” for schools in transitioning to a green cleaning platform. These state guidelines serve as a valuable resource by providing school districts with structured programs that have been proven in the field.

Cont’d from page 29 Roadmap to Implementing…

United States shows that promoting stewardship and increasing institutional commitments are critical to both short- and long-term success. Green cleaning is also a good way to demonstrate the concept of thinking globally and acting locally.

At East Meadow Union Free School District, the Facilities Department invites input from custodial staff, administrators, and support staff, as well as parents and students. The director of Facilities and Operations meets regularly with PTA representatives at district safety committee meetings. Recognizing its responsibility to educate students to be global citizens, the district integrates conservation of resources and preservation of a healthy environment into all areas of the curriculum.

The Facilities Department does its share in supporting education by supplying a variety of posters designed to remind students of the importance of proper hand washing to maintain personal health and prevent the spread of diseases. The department also works closely with teachers and administrators to provide information and resources pertinent to health and safety issues. The inclusion of students in the management of the recycling program has encouraged increased participation by all, ensuring success of the district’s recycling efforts.

“We are determined to develop a green cleaning ‘culture’ that will be sustainable in the future,” Brewer said. “We have made a strong commitment to ‘Cleaning for Health’ and we encourage our staff to think of themselves as ‘environmental stewards’ rather than maintenance, custodial, or technical staff members, because every activity they perform is in some way related to providing a safe and healthy indoor and outdoor environment for the children, students, and staff of the district. Thinking about the environmental consequences and trying to be green is what we strive for in all facets of our operations.”

Rochelle Davis is president and CEO of the Healthy Schools Campaign (www.healthyschoolscampaign.org) and executive editor of The Quick & Easy Guide to Green Cleaning in Schools. In her role at HSC, Davis leads efforts to make environmental health and wellness a central part of every child’s education.
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