Green Cleaning in Schools:
A Guide for Advocates

ramp
REGIONAL ASTHMA
MANAGEMENT & PREVENTION

Regional Asthma Management and Prevention (RAMP) is a collaborative that promotes strategies for reducing asthma through a broad and comprehensive approach, which includes clinical management and environmental prevention. RAMP brings together diverse partners such as public health and community-based organizations, schools, medical providers, and environmental health and justice groups to join forces in reducing the burden of asthma with a focus on communities inequitably affected by the disease.

RAMP also coordinates a statewide network of asthma coalitions called Community Action to Fight Asthma (CAFA). Together with CAFA members and the Green Schools Initiative, RAMP has produced this advocacy guide to help those concerned about the environmental health of their local schools.

Often, the very products used to keep schools clean and healthy contribute to poor indoor air quality (IAQ), seriously affecting those with asthma or other respiratory problems. This guide provides information and strategic guidance on how parents, students, and other advocates can work with their school district and others to improve IAQ by switching to certified green cleaning products.

In this guide you will find:

- **Information on why green cleaning in schools is important**
- **Four steps you can take to initiate change in your schools**
- **Fact sheets on the health and environmental impacts of traditional cleaning products and the ways some schools have saved money using certified green cleaning products**
- **Tips on developing your message**
- **Resources on how schools can implement the use of green cleaning products**
- **Links to sample letters, presentations, and policies**

Why Green Cleaning in Schools?

Why should you care about how classrooms are cleaned at your school?

One in five Californians spend their day at school, including students, teachers, and staff. Alarmingly, the California Air Resources Board found significant environmental health concerns in many of California's classrooms. Some of these concerns stem from the very products used to keep the school clean. As a result, school children and staff are unnecessarily exposed to chemicals commonly found in traditional cleaning products, chemicals that have been linked to asthma and other respiratory problems, cancer, reproductive and neurological harm, and hormone disruption. Additionally, these products are known to have negative impacts on the environment, including contributing to water pollution, smog, and damage to the ozone layer.

Why this is a particular concern for those with asthma?

Asthma is a major problem for school-aged children and school employees. One in six children in California has been diagnosed with asthma. It is the leading cause of school absences due to chronic disease in the country, costing children their education and their schools resources in attendance-based funding. Work related asthma is high for school employees, including custodial workers who have one of the highest rates of occupational asthma in the country. Studies have linked the cleaning products used in schools to both the cause of asthma and the trigger of asthma attacks.

How are parents, students, and staff responding to this issue?

Schools are becoming increasingly aware that healthy and environmentally friendly facilities foster academic achievement and staff well-being. Proactive parents, students, and staff across the state have examined their school's cleaning practices to develop strategies for improving student and staff health and reducing their impact on the environment. Developing healthy cleaning practices in schools is one strategy that has repeatedly proven successful across California. Some schools have adopted the exclusive use of certified green cleaning products. These products have been proven to effectively clean offices, schools, and other institutional facilities while meeting a number of health and environmental standards, including special consideration for exposures to children.

To read more about the experience of three school districts in California, see our report, *Breathing Easier: School Districts Make the Switch to Certified Green Cleaning Products* (www.rampasthma.org/2009/05/breathing-easier/)

What are environmentally preferable, green cleaning products?

Conveying a clear solution is as important as outlining the problem. "Environmentally Preferable" and "Green Cleaning Products" are terms often used to describe the newly formulated cleaning products that are alternatives to conventional cleaning products. Recognizing that neither of these labels eliminate all health and environmental risks, switching to third-party certified green cleaning products provides schools with a straight forward way of identifying and using the least toxic products available.

Third-party certifiers establish health and environmental standards for products though a transparent process that includes stakeholder involvement. Products must meet these published standards in order to receive the certified label. Two certifiers with standards for institutional cleaners used in schools are Green Seal (www.greenseal.org) and EcoLogo (www.ecologo.org). Each certification program is different, so it is important to familiarize yourself with the various standards if you are going to suggest that schools use them.

What can you do?

Change does not happen on its own. Committed parents, students, teachers, staff, and other advocates must choose to get involved with their schools and support them in making the switch. Follow the guidance in the **Taking Action** section to see how you can help reduce environmental asthma triggers and create a healthier school.

Taking Action: How Do I Get My School To Use Certified Green Cleaning Products?

Many parents and health advocates have successfully convinced their schools to switch to certified green cleaning products. You can do it too. If you believe your local school can do more to ensure a healthy school environment, these steps will help you advocate for green cleaning in schools. The guidance outlined below should be viewed as a fluid process rather than sequential steps. We encourage you to be flexible as some steps may take place simultaneously, and you will need to make adjustments to others depending on what works in your community. The following steps will help you successfully advocate for green cleaning in your school:

1. **Find out about the cleaning practices in your school district**
2. **Learn the facts about green cleaning**
3. **Build a team of allies**
4. **Engage decision makers**

1. Find Out About the Cleaning Practices of Your School District: Are They Using Certified Green Cleaning Products?

Your first priority is to find out about the cleaning practices of your local school. You may be pleasantly surprised, as schools often do not advertise their green cleaning activities. Once you ask some questions, you may find that you don't have to do anything!

However, you have to ask the right people to find out. Because maintenance and custodial practices and policies are generally established at the school district level, it is important to talk with both school and district-level staff to get a clear picture of your school's environmental health. Key targets are school principals, district facility staff, the superintendant, and school board members. The questions you ask should help you determine if a transition to certified green cleaning products is needed. Here are some examples of effective questions:

- **What cleaning products are being used at your school(s)?**
  - How often are they used?
  - Are they certified green cleaning products?
  - If so, who are they certified by?
    The Green Schools Initiative has a cleaning products inventory worksheet to help schools identify products used: www.greenschools.net/downloads/GreenCleaningPilotInventory112009.doc
- **Are the products ready to use or concentrated?**
  - If concentrates, is automatic dilution equipment used?
- **Do teachers and staff use cleaning products brought from home in their classrooms or offices?**
  - If so, how common is this practice and what products do they bring to campus?
- **[In California] Are all of your schools considered "in good repair" according to the Facility Inspection Tool, or F.I.T.? www.cashnet.org/resource-material/FITGuidebook.pdf**
  - If not, which school facilities require repairs? You can also look this up on a school's School Accountability Report Card (www.cde.ca.gov/ta/ac/sa/williamsimpact.asp)
- **Does the school/district implement any Indoor Air Quality (IAQ) programs, such as the U.S. EPA's Tools for Schools? www.epa.gov/iaq/schools/actionkit.html**
- **How many students and staff have asthma?**
  - How many miss school or work because of asthma?

Helpful Hint: Anticipate Resistance

Change is always seen as risky. Do not be surprised if barriers and road blocks arise along the way—in fact, anticipating those objections and having counter-arguments ready could serve you well. Common objections to taking action include:

- I've used these products my whole life and I'm healthy.
- Green products just don't clean as well.
- Green products are too expensive.

Counter these fears with facts on the health benefits, effectiveness, and cost of green cleaning found in this guide to help you move past fears and resistance.

2. Learn the Facts: Build Your Case for Green Cleaning

If you are going to effectively advocate for healthier cleaning practices at your school district, you will need to be able to clearly explain the risks of traditional practices and the benefits of green cleaning. It may take some convincing to get decision-makers to act. Having a firm understanding of the issues will help you make the most persuasive case that transitioning to green cleaning products is a great step towards ensuring the health and safety of students, teachers, and school staff.

In the appendices, we have provided two extensive fact sheets to help you get started. **Appendix A**, developed by RAMP and The Environmental Working Group, provides you with the scientific evidence on the negative health effects of traditional products. **Appendix B**, prepared by the Green Schools Initiative and the Green Purchasing Institute, outlines how schools have found cost savings by transitioning to certified green cleaning products. Integrate the information in these fact sheets and any research you do on your own to develop a strong case for your schools to change. Here are some key points:

Developing your Message: Schools have saved money using green cleaning products by:

- Using Concentrates and Dilution Equipment
- Using Multi-Purpose Products
- Taking Advantage of Procurement Contracts
- Improving Health and Efficiency

(See Appendix B for details)

- **Green cleaning products pose less health risk:** Certified green cleaning products are not allowed to contain ingredients that cause cancer or asthma, or to contain phthalates and heavy metals. A recent report by the Environmental Working Group (EWG) found that certified green cleaning products contained one third the chemicals with known health effects compared to traditional products used in schools. Additionally, a mock classroom cleaned with green cleaners had one-sixth the air pollution of those cleaned with traditional products (see EWG's full report here: www.ewg.org/schoolcleaningsupplies).

- **Green cleaning products are safer for workers.** Certified green cleaning products cannot be corrosive to the skin or eyes and must meet standards for inhalation toxicity, absorption through the skin, and combustibility. Nationally, custodial chemical injuries cost on the order of $25 million each year in lost time and workers compensation.

- **Green cleaning products are better for the environment.** Green cleaning products must meet stringent criteria to ensure they are environmentally preferable. Certified products are free of ozone-depleting chemicals, less toxic to aquatic life, less likely to build up in the body, have fewer smog-producing chemicals, degrade quickly in the environment, and are more concentrated to reduce greenhouse gas emissions from shipping. Products must even meet criteria concerning recyclable packaging.

- **Green cleaning products can help schools save money.** Schools are saving money by using concentrated green cleaners, automatic dilution equipment, and reducing the number of cleaning products schools need. After phasing green cleaning into all 180 schools in June 2008, Palm Beach County School District (Florida) projected annual district wide savings of $360,000. Additionally, schools can save money by achieving better health for students and staff. California, for example, estimates a loss of $40 million annually from asthma related absences alone.

Additional Resources:

- *Household Hazards: Potential Hazards of Home Cleaning Products* highlights the health effects of household cleaning products: www.womenandenvironment.org/campaignsandprograms/SafeCleaning/HazardsReport.pdf
- The Janitorial Products Pollution Prevention Project has facts and resources about the health impacts of common janitorial products: www.westp2net.org/Janitorial/jp4.cfm

3. Build a Team of Allies: Find and Work with Others

No matter how much passion you have, no one can do this alone. The key is to find allies who will work with you to improve the school. At this point it may be helpful to map out the players in your school community. Your school may have a Coordinated School Health Council, a health and safety team, a "green team", or a student leadership group already working on school health. You may find willing partners in parents, students, teachers, school nurses, administrative staff, school board members, and custodial staff. There may also be health advocates, non-profits, or local civic and neighborhood associations that could be strong allies on this issue as well.

Find out who is out there and start talking to them. For some, this may be the most intimidating part. How do you approach so many people you don't know and who may disagree with you? One way to simplify the process is to find ways to address groups of people. Presentations and discussions at Parent Teacher Association or Parent Teacher Student Association meetings can be a great place to start. Another effective strategy to spread the word is to identify people with influence within groups. For example, talking to local union leaders can help you get a large number of supporters and active partners (teachers, custodian, and school employees each have labor unions). In Solano Unified School District (California), for example, the Solano County Asthma Coalition partnered with the teachers union, custodial staff, and district administration to develop and implement green cleaning practices district wide.

Developing Your Message: Certified Green Cleaning Products Work

In addition to meeting strict health and environmental standards, green cleaning products must clean as effectively as traditional products in order to receive certification.

With a group of partners who understand the issue and have agreed on a strategy, you can send a powerful message to decision makers about the importance of the issue and the need to take action. You can demonstrate the broad support for action by submiting sign-on letters or petitions with the signatures of your allies to decision makers as part of your request to meet with them to talk about the issue.

Additional Resources

- The Green Schools Initiative has a sample powerpoint presentation on green cleaning in schools: www.greenschools.net/downloads/GreenCleaningWebinar112109.pdf
- The Environmental Working Group has a sample letter to schools requesting information about cleaning practices: www.ewg.org/files/2009/10/school-cleaners/letter.doc

4. Engage Decision-Makers: Commitment is Essential

Now that you have the backing of numerous supporters (ideally, some of whom will be the decision-makers themselves), you are poised to ask for commitments from the school district to take action. So what do you ask schools to do? That's up to you and your partners. As a group, you can work with school officials to develop a plan that is going to work in your community. Below you will find several green cleaning resources designed specifically for schools that outline strategies a school can employ to incorporate healthier cleaning practices. Reviewing these guides with school staff may help determine the best course of action for your school.

Developing Your Message: Win-Win Opportunity

Not only are certified products **safer**, they also **work**, are **widely available**, and are **cost effective**.

Often, schools decide to transition to certified green cleaning products in phases. This can be a good strategy to pursue as fears and doubts about green cleaning products can be overcome through initial pilot projects. Staff can test green products and procedures at a few schools to identify what works for them. Once the pilot is complete, the district can gradually expand the program to all of its schools. Finally, when green cleaning is fully in place, school districts can make green cleaning a district policy.

Additional Resources

Sample Policies

- The Environmental Law Institute has links to green cleaning policies from school districts across the country: www.eli.org/Program_areas/Green_Cleaning/index.cfm
- Santa Cruz Unified School District has an Environmentally Preferred Purchasing policy: www.sccs.santacruz.k12.ca.us/files/Environmentally%20Preferable%20Purchasing%20Policy.pdf
- Cleaning for Healthy Schools outlines the essential elements of a healthy cleaning policy: http://greenschools.live.radicaldesigns.org/downloads/Green%20Cleaning%20Sample%20Policy.doc

Green Cleaning Guides for Schools

- The Green School Initiative's (GSI) *Green Schools Buying Guide* contains a section specifically about green cleaning products: www.greenschools.net/display.php?modin=54&uid=56
- GSI also has a guide for schools to develop pilot projects: www.greenschools.net/article.php?id=245

- *The Cleaning for Healthy Schools Toolkit* contains a series of presentations that can help schools map out a transition to green cleaning products (with audio): www.cleaningforhealthyschools.org/
- *The Quick and Easy Guide to Green Cleaning in Schools* by the Healthy Schools Campaign is a multimedia guide on establishing green cleaning practices at schools: www.healthyschoolscampaign.org/campaign/green_clean_schools/guide.php
- INFORM has created an eight step plan for schools to implement environmentally preferred cleaning practices at schools: www.informinc.org/chpimp.pdf

Certified Green Cleaning Products

- Green Seal's Institutional Cleaning Products Standard GS-37: www.greenseal.org/certification/standards/GS-37_Industrial_Cleaner_Standard.pdf
- EcoLogo's Standard for Hard Surface Cleaners CCD-146: www.ecologo.org/common/assets/criterias/CCD-146.pdf

General Resources

- US EPA Tool's for Schools: www.epa.gov/iaq/schools/
- Collaborative for High Performing Schools: www.chps.net
- Green Purchasing Institute: info@greenpurchasing.org (hands-on technical assistance)
- Healthy Schools Network: www.healthyschools.org/clearinghouse.html

Appendix A

Health and Environmental Benefits of Green Cleaning Products

Protecting our Children, Teachers, School Workers, and the Environment

Compiled by Environmental Working Group and Regional Asthma Management and Prevention

Health and Environmental Benefits of Green Cleaning Products

One in five Californians spend their day at school, including students, teachers, and staff. Alarmingly, the California Air Resources Board found significant environmental health concerns in many of California's classrooms [1]. Some of these concerns stem from the very products used to keep the school clean. As a result, school children and staff are unnecessarily exposed to chemicals commonly found in traditional cleaning products, chemicals that have been linked to asthma and other respiratory problems, cancer, reproductive and neurological harm, hormone disruption, water pollution, smog, and damage to the ozone layer.

Schools are becoming increasingly aware that healthy and environmentally friendly facilities foster academic achievement and staff well-being [2, 3]. Proactive school districts across the state have examined their cleaning practices to develop strategies for improving student and staff health and reducing their impact on the environment. One strategy that has repeatedly proven successful across California is transitioning to the exclusive use of certified green cleaning products. Certified green cleaning products are used to clean offices, schools, and institutions, and must meet a number of health and environmental standards. These standards include special considerations for exposures to children in schools and day-care facilities.

Green cleaning products do not contain ingredients that cause asthma

One in six children in California has been diagnosed with asthma [4]. It is the most common chronic disease among school-aged children, and is the leading cause of school absences due to chronic illness nationwide [5, 6]. Work-related asthma is high for educational service workers, including teachers, instructional aides, and janitors; a recent study of California and three other states notes many teachers specifically link exposures to cleaning products with development of work-related asthma [7]. Several more studies confirm that occupational and home use of conventional cleaning products is associated with increased risk of asthma [8-10]. Certified green cleaning products are prohibited from containing asthmagens (chemicals that cause asthma) and have limits on some asthma triggers (chemicals that exacerbate existing asthma).

Cleaning products also contribute to asthma indirectly, by releasing a host of volatile organic compounds (VOCs) that form ozone. Ozone is the primary component of smog that can trigger asthma. A six-month study of fourth graders in 12 Southern California communities documented an 83% increase in respiratory-related absences when daytime ozone levels increase by 20 parts per billion [11]. Children who grow up in smoggy regions have permanently scarred lungs, and feel lifelong effects of diminished lung capacity [12]. In California, cleaning products release 32 tons of ozone-forming VOCs into the air each day [13]. Certified green cleaning products must meet strict limits regarding the levels of volatile chemicals emitted, reducing their contribution to smog and asthma.

Green cleaning products reduce unnecessary use of harmful "antibacterial" agents

Certified green hand soaps do not contain antibacterial ingredients. A U.S. Food and Drug Administration scientific advisory panel determined that "antibacterial" soaps are no better than regular soaps at killing germs or reducing the spread of infection [14]. The American Medical Association recommends avoiding "antibacterial" products at home, as they may promote bacterial resistance to antibiotics [15]. Triclosan, an antibacterial agent often found in liquid hand soap, may disrupt thyroid and estrogen hormones [16, 17], and forms toxic byproducts in tap water and the environment [18, 19]. The Centers for Disease Control has found that triclosan contaminates the bodies of 75% of the American population [20], due to widespread use of "antibacterial" products.

Green cleaning products are safer for workers

Conventional cleaners can pose safety risks to custodians, especially from injuries like chemical burns to eyes and skin. Nationally, custodial chemical injuries cost on the order of $25 million each year in lost time and workers compensation [21]. Certified green cleaners meet standards that specifically address health and safety concerns of custodial workers, ensuring reduced on-the-job injury. For example, green cleaning products cannot be corrosive to skin or eyes. Ingredients in green cleaners must also meet specific criteria regarding acute and inhalation toxicity, absorption through the skin, and combustibility. Certified products must have appropriate health and safety labels, and training is available to ensure workers use products safely.

Green cleaning products are better for the environment

Green cleaning products must meet stringent criteria to ensure they are environmentally preferable. Certified products are free of ozone-depleting chemicals, less toxic to aquatic life, less likely to build up in the body, have fewer smog-producing chemicals degrade quickly in the environment, and are more concentrated to reduce greenhouse gas emissions from shipping. Products must even meet criteria concerning recyclable packaging.

Green cleaning products do not contain the following chemicals of concern common in traditional cleaning products:

- **Carcinogens, mutagens, and reproductive toxins** specifically identified as known, probable, reasonably anticipated, or possible human toxins by many state, national and international agencies.
- **Heavy metals** like lead, chromium, and selenium can cause neurodevelopmental damage in children [22] and cancer [23], as well as ecological harm [24].
- **2-Butoxyethanol** is a widely-used ingredient that damages red blood cells, causing anemia [25]. It may also be a carcinogen and reproductive toxin [25]. Typical home cleaning using 2-butoxyethanol products leads to air contamination exceeding established health-based limits for the workplace [26].
- **Phthalates** are frequently found in fragrances in cleaning products. Dibutyl phthalate is also used in floor finishes and window cleaners. Children exposed to phthalates in indoor settings face increased risk of asthma and allergies [27]. Human studies link alarming health effects to phthalate exposure, including male reproductive system abnormalities [28] and hormone disruption [29, 30].
- **Alkylphenol ethoxylates** break down into alkylphenols, potent hormone-disrupting chemicals [31]. A Centers for Disease Control study found that the bodies of at least 51% of Americans are contaminated by alkylphenols [32]. These chemicals survive wastewater treatment to enter rivers, lakes, and the ocean, harming aquatic life [33]. The E.U. and Canada have banned these chemicals in cleaners.

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Appendix B

FREQUENTLY ASKED QUESTIONS (FAQs) ABOUT THE COST OF CERTIFIED "GREEN" CLEANERS

Prepared by the Green Purchasing Institute and Green Schools Initiative

FREQUENTLY ASKED QUESTIONS (FAQs) ABOUT THE COST OF CERTIFIED "GREEN" CLEANERS

Do environmentally preferable cleaners cost more than conventional products?

Although "green" cleaners may sometimes appear more expensive than conventional products, they most often cost the same – or less – to use. Many school districts as well as local and state agencies that have switched to environmentally preferable cleaners have saved money by replacing a "ready to use" conventional cleaning product with a highly concentrated "green" cleaner. All institutional cleaning products certified by Green Seal and EcoLogo are concentrates.

The cost savings are even more dramatic when institutions start using automatic dilution equipment, which reduces the unnecessary, expensive and potentially hazardous overconcentration of cleaning products diluted manually. Moreover, many schools that have embarked on a green cleaning program have saved money by reducing the number of cleaning products they need to stock by eliminating unnecessary products. Finally, some school districts have negotiated comparable prices for green cleaners from their vendors or through cooperative purchasing agreements.

Jason Luke, Associate Director of Custodial Support Services at Harvard University Medical Center explained:

In the past, green cleaning products were more expensive, but that is not the case anymore. At minimum the decision to use green cleaning products will be cost neutral. A strong case can be made for cost savings, but this largely depends on what one is switching from: if the current products are not purchased in concentrate form, if dilution control systems are not being utilized, if the current number of products being used is excessive and can be replaced by a smaller group of core products, etc., then a significant cost savings can be realized. [1]

Which school districts have switched to environmentally preferable cleaners with no additional cost?

A variety of reports document the experiences of individual school districts switching from conventional to "green" cleaners. According to an October 2008 report published by the Connecticut Foundation on Environmentally Safe Schools, "Many school districts that have adopted green cleaning products and practices have experienced no increased costs or significant cost savings." [2] For example:

- After the Palm Beach County School District (Florida) saved over $500 in one school during a three-month pilot project, it began phasing in green cleaning to all of its 180 schools in June 2008, with a projected annual district-wide savings of $360,000. [3]
- Northern Tioga County School District (Pennsylvania) saved nearly $20,000 in one year by eliminating aerosols and other hazardous cleaning products. "Ounce for ounce, aerosols often are more expensive than other cleaning solutions and emit harmful fumes that are inhaled by building occupants." [4]
- A 2003-2004 pilot project led by the Healthy Schools Campaign to introduce green cleaning into the Chicago Public School District revealed that the price of Green Seal-certified products was cost-competitive with traditional products. [5]

Have any other entities reported cost savings associated with the use of certified "green" cleaners?

Yes. The City of Santa Monica, CA reported spending 5% less on its cleaning products costs when it switched from conventional cleaners to less-toxic brands a decade ago. Part of this savings was accrued by eliminating duplicative and expensive cleaning products – many of which were in aerosol containers. [6]

The City and County of San Francisco found environmentally preferable janitorial cleaning products at no increased cost to replace 13 out of 14 product-types. [7] A 2007 report by the San Francisco Department of the Environment concluded that "Buying Environmentally Preferred Products [janitorial products] is expected to cost roughly the same as traditional products for most product categories." [8]

Minneapolis, MN, which adopted a Low Environmental Impact Cleaning Policy in 2007, reported cost savings in its three-year pilot test of "green" cleaning products. [9] Similarly, Nassau County, NY, which "spends more than $40,000 each year on cleaning supplies" issued a "green cleaning" Executive Order in 2006, after "County officials found that, in most instances, the environmentally friendly products are cheaper than existing products." [10] The City of Seattle made the transition to certified "green" cleaning products several years ago. A fact sheet published by the City states, "In addition to their 'green' benefits, the [environmentally friendly cleaning] products improve health and safety in our buildings, are cost-effective, and they work!" [11]

How have schools saved money using certified "green" cleaning products?

1. Green-certified cleaning products save money because they are often more highly concentrated than conventional cleaning products. Savings are greatest when schools use automated equipment to dilute concentrated green cleaners. (When comparing cleaning products, it is important to calculate the cost of the diluted product on a per-application, "as used" basis, rather than looking only at the cost of the bottle of concentrate, since dilutions can vary widely.)

- In a pilot test conducted by the Green Purchasing Institute for the State of Hawaii, two schools in Honolulu reduced the cost of their restroom cleaning products from $6-12 per gallon to less than $1 per gallon by replacing a ready-to-use conventional product with a highly-concentrated Green Seal-certified product that is typically diluted with 64 to 256 parts water. [12]
- Harvard University Medical School replaced its conventional ready-to-use glass cleaner, which cost $1.50 per quart, with a less-toxic, concentrated glass cleaner that cost only $0.25 per quart when diluted. The Manager of Custodial Services reported: "The cost impact of going green for us at the Medical School was negligible for two reasons: We had gone to portion control chemical dispensers previous to green chemicals and the green chemicals are on the portion control system. Portion control is where the real savings are. Our price on the green chemicals was the same as the cost of the non-green chemicals." [13]

2. Several school districts have reported saving money by reducing the number of different products they use.

- Riverside Military Academy in Gainesville, GA realized a $280,000 annual savings by replacing 20 different cleaning products with a single Green Seal-certified product to clean 270 dorm rooms and 100 bathrooms. [14]
- Harvard University Medical School reported saving $11,700 a year when it switched to green cleaning products by reducing the number of products they used.

3. Many school districts have saved money through negotiated procurement contracts.

The Novato Unified School District in Marin County, CA, for example, successfully transitioned to green cleaning products at all sites with no additional expense above what the District had been paying for conventional cleaning products by working through its long-term contract with a local vendor. "The market trend is that the costs for green products are going down, and having a long-term contract has helped us to lock in prices and better manage our budget projections," according to Mark Silva, Director of Maintenance, Operations and Transportation for Novato Unified. [15]

Last year, a multi-state contract negotiated by the Western States Contracting Alliance (WSCA) with Waxie, a San Diego-based janitorial supplies vendor, resulted in 45-50% discounts off retail prices on several major brands of green cleaning and floor maintenance products (such as Johnson Diversey, 3M, Spartan, EcoLab, and others). Additional discounts are offered to schools for online or bulk purchases, and for groups participating in Waxie's Environmental Partnership Program. The contract also offers free dilution equipment, technical assistance, and training. [16] Mike Muscara, Corporate Accounts Director for Waxie, testified before the CA State Assembly in 2008 that the prices of its "green" cleaners are equivalent to its conventional cleaning chemicals. By ordering discounted green cleaning products from Waxie, San Francisco United School District (USD) has been able to switch to less-toxic cleaners with little or no additional cost. School districts in California can also receive discounts on green cleaners through cooperative purchasing agreements with the State of California (from Grainger), US Communities (from Zep), and several localities.

What are other costs associated with using conventional cleaners?

Conventional cleaners can pose serious health and safety risks to custodial workers. There are an estimated 40 to 60 chemical injuries per year for every 1,000 custodians, most are chemical burns to the eyes and skin as well damage to the respiratory system. Nationally, these injuries cost about $25 million per year for in workers' compensation claims and lost time. [17] In a Washington State study, the validity of these costs were generally confirmed by higher insurance premiums paid for janitorial contractors, compared to auto repair shops or metal finishing firms. [18] Some chemical ingredients in cleaners can cause asthma, which is the primary cause of school absenteeism from a chronic illness. According to a report by Community Health Works, for California children ages 12-17 alone, the California Department of Health Services estimates a loss of $40.8 million to schools from preventable absences due to asthma in 2001. [19] Asthma costs California approximately $1.3 billion per year, with Medi-Cal paying approximately 45% of the cost of care for children. [20]

Have schools experienced other benefits from using certified "green" cleaning products?

Yes. According to Francis Kennedy, Custodial Supervisor for Fairfield-Suisun USD, there is often additional, unquantified "savings in better indoor air quality, fewer job injuries due to toxic chemicals, and less damage to the facilities because

of spills or misuse of the toxic product." [21] Mary Curtin, a RN at Martinez Unified School District, noted that "The green products will most likely save district money with diminished school absences and improved employees' health….The dilution machines also cut down cleaning time." [22] Using green cleaners contributes to better indoor air quality, which the U.S. EPA has documented has numerous benefits for student academic achievement. [23]

What are the experiences of schools in New York and Illinois, where laws were adopted requiring schools to use certified environmentally preferable cleaners?

Kurt Larson of the New York State Office of General Services Environmental Services Unit, spearheading implementation of New York's 2005 *Green Cleaning in Schools Law*, stated that his office has not heard complaints from schools about the cost of green cleaners. "Since there are about 750 school districts in the state, if the requirement to use certified green cleaners was onerous, we would likely be hearing about it," Larson said. "Anecdotally, we're hearing that the green cleaning products work effectively and last longer because they are concentrated and the dispensing systems are more accurate. In addition, the new products are usually implemented in conjunction with a comprehensive green cleaning program, often reducing the number of cleaning products required, which saves money." [24]

Prior to passage of the Illinois Green Clean Schools Act in 2007, several cleaning product manufacturers and distributors testified that green cleaning programs are cost-neutral. Nevertheless, the legislation was written to include an exemption clause that addresses the concern some schools had about costs. This clause allows schools to opt out of the law's green cleaning requirements if they determine that it would increase their cleaning costs. Mark Bishop of the Chicago-based Healthy Schools Campaign noted, "In follow up discussions with more than 25 districts, not a single facility manager told us that their costs increased. Most of the facility managers we spoke to said that while some elements of the green cleaning program cost more, some elements cost less; overall, green cleaning resulted in no additional cost. Additionally, as of April 2, 2009, the State of Illinois has received only four notices of schools determining that green cleaning is not economically feasible [out of nearly 900 districts in the state]." [25]

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