Cleaning for Asthma Safe Schools

How to pilot a green cleaning program in your school district

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This presentation will cover

• How cleaning products affect health
• Green cleaning practices
• Steps to take for green cleaning pilot
• Additional resources
Green Schools Report Card: Pollution & Environmental Quality

50% of schools in U.S. have problems linked to poor indoor air quality

Asthma is the leading cause of school absences from a chronic illness
Health Hazards of Cleaning Products

Ingredients in common cleaning products have been linked to:

- New cases of asthma and triggering asthma episodes
- Harming the brain, nervous system, reproductive organs, kidneys and liver
- Irritating eyes and causing headaches
- Breathing problems and illnesses
- Disrupting/acting like hormones
- Cancer
What is Asthma?

Asthma is a chronic (long-term) lung disease that makes it hard to breathe.

Symptoms include:

– Wheezing
– Chest tightness
– Coughing
– Shortness of breath
– Difficulty breathing
**What is Work-Related Asthma (WRA)?**

WRA is asthma caused or made worse by something at work.

Cleaning products can cause work-related asthma.

- Small amounts can trigger asthma symptoms.
- People who never had asthma before can get it from chemicals in cleaning products
  - May have breathing problems or asthma for rest of life.
Workers & Hazardous Cleaners

- 5 billion pounds used annually
- A single custodial worker uses, on average, 194 pounds of chemicals each year
  - 25% of these are hazardous substances
- Custodians and teachers experience some of the highest rates of occupational asthma
- $25 million/yr in worker comp claims
- 6 out of 100 custodians are injured each year
  - 20% are serious burns to the eyes or skin
  - 12% are a result of inhaling chemical vapours
Children are most vulnerable

- Developing body & lungs
- Greater exposures from higher metabolism, breathing rates
- Bodies cannot get rid of chemicals like adults
- More active, hand-to-mouth
- Exposures affect development, learning, and lifetime health
Health Affects Learning and Productivity

- Asthma is leading cause of school absenteeism from a chronic illness, ~1.9 million missed school days in CA in 2005
- Loss of ~$40.8 million to schools from asthma absences of 12-17 year-olds
- Lower academic achievement is associated with asthmatic students
The Solution? Cleaning for Health!

Cleaning that:

- Protects health of workers, children, public
- Improves indoor air quality
- Reduces environmental impacts (smog, ozone depletion, global warming, fish toxicity)

Start a “green” cleaning program to:

- Choose safer products
- Keep dirt out
- Reduce quantity of chemicals
- Minimize exposure
Cleaning for Health Best Practices

- Choose safer products: Use less-toxic, third-party certified cleaners, paper products and hand soaps
- Keep the dirt out; use easy-to-clean flooring and walk-off mats at building entrances
- Reduce quantities of chemicals, Minimize exposures, Dilute properly
- Update and maintain equipment – HEPA vacuums, micro-fiber, dilution stations
- Disinfect only in target areas
- Avoid aerosols & fragrances - clean doesn't have an odor
Choose Third Party Certified Green Cleaners

- Does not allow ingredients that cause cancer, asthma, or that impact reproductive health
- Not harmful to eyes or skin
- Won’t pollute air or harm fish
- Concentrated; dilute on site
- Vendor training available
- Tested for its performance
- Independent Certification Programs:
  - Green-seal www.greenseal.org
  - Ecologo www.ecologo.org
- Green Schools Buying Guide: www.greenschools.net
Choosing Less-Toxic Cleaning Products

Made by many major manufacturers
- 3M, Betco, Butchers, Ecolab, Johnson Diversey, Hillyard

Sold by mainstream distributors
- Grainger, CleanSource

Comparable pricing
- Special discounts offered to schools through WSCA contract with Waxie

Balancing Act: Environment + Price + Performance
Green Schools Buying Guide: www.greenschools.net

**Buying Guide**

*Environmentally Preferable Purchasing (EPP) and Green Purchasing*

*About the Green Schools Buying Guide*

*Programs to help you buy green*

*Buy cooperatively or purchase in bulk*

*Write a green bid or contract*

*Adopt A Green Purchasing Policy*

*Green Cleaners: Health Criteria & Best Practices*

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**Product: Green Cleaners**

- Green Products: What Should I Get?
- Criteria: How Do I Know It's Green?
- Costs: Can I Afford It?
- Beyond Buying: Other Environmentally Friendly Options

**Green Products: What Should I Get?**

Schools can choose institutional green cleaning products that have been independently certified by either Green Seal or Canada’s EcoLogo Program. Ask your existing vendors whether they carry any of these certified product lines.

*To find these green products, go to:*

- Green Seal - GS-37 certified products
- EcoLogo - CCD-146 certified products

**Criteria: How Do I Know It's Green?**

**Green Cleaners**

There are many cleaning products on the market that manufacturers claim to be “non-toxic,” “biodegradable” or environmentally preferable for some reason. These claims can be misleading, inaccurate or incomplete, making it difficult for schools to determine which products to buy to best protect workers, students and the ecosystem. Schools have several options: they can establish their own health and...
Minimize Disinfectant Use

• All disinfectants are toxic, no “green” disinfectants (yet) (Disinfectants are EPA-registered pesticides)
• Disinfectants should be…
  • Used only when needed
  • Applied only after surface is cleaned
  • Properly diluted
  • Avoiding “quats”
• Follow manufacturer’s instructions
• Require training of workers
• Consider peroxide-based disinfectants
What about H1N1?

According to the CDC:

- School staff should routinely clean areas that students and staff touch often with the cleaners and disinfectants they typically use. The CDC does not believe any additional disinfection of environmental surfaces beyond recommended routine cleaning is required.

http://www.flu.gov/professional/school/schoolguidancepdf.pdf
Avoid Anti-bacterial Soap

US Food and Drug Administration states:
- No more effective than soap & water
- May increase germs’ resistance to antibiotics

Anti-bacterial soap may affect hormones; bad for our environment

Found in: Hand soaps, toothpaste, dishwashing liquids and sponges
Dilute Properly

- Use automatic dilution equipment
  - Prevents exposure
  - Saves money

- Follow instructions
  - Twice as much is NOT twice as good
Try Microfiber

• Cost-effective (life-cycle basis)
• Reduce chemical use (~1/2)
• Minimize water use (up to 95%)
• Prevent injuries (chemical exposure, back strain, accidents)
• Effective (reduce dirt, avoid cross-contamination)
Reduce Exposure

- Use equipment that reduces exposure
- Ventilate
- Use work methods that reduce exposure
- Clean when other occupants away
- Provide protective equipment
  - Gloves, goggles, respirator
Conduct Training

New products may require different cleaning methods.

Training is essential to ensure proper transition to green cleaning products and practices.

Many manufacturers and distributors offer free training.
Greener School Cleaning Supplies = Fresh Air + Healthier Kids

Green cleaning releases one-sixth the air pollution
Greener School Cleaning Supplies = Fresh Air + Healthier Kids

Average number of air contaminants

- Conventional cleaning products (we tested 8): 38
- Certified Green cleaning products (we tested 5): 8

General purpose cleaners
Vermont school reported:
- 60% decrease in asthma attacks (from 15 to 6)
- 37% reduction in reported cold symptoms (from 230 to 144)

Minneapolis, MN conducted 3-year “green” cleaning pilot test and reported:
- Fewer sick days for custodial staff
- Reduced hazardous waste and other liabilities
- Improved indoor air quality
Green Cleaners Save $

◆ Reducing variety of products used
   Replacing 20 products with 1 Green Seal product saved $280,000/year at Riverside Military Academy, Gainesville, GA

◆ Reducing amount of chemicals used via best practices, dilution equipment
   Palm Beach schools saving $360,000/yr

◆ Purchasing with procurement contracts
   Novato Unified switched with no additional cost; Waxie offers 45% discounts, US Communities, State of California
<table>
<thead>
<tr>
<th>Product</th>
<th>Size</th>
<th>Cost/Gal</th>
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<tbody>
<tr>
<td>Conventional (NABC)</td>
<td>55 gal drum</td>
<td>$6.90</td>
</tr>
<tr>
<td>Conventional (NABC)</td>
<td>55 1-gal bottles</td>
<td>$12.00</td>
</tr>
<tr>
<td>Green Alpha HP (1:64)</td>
<td>2 1/5 1.5L bottles</td>
<td>$0.96</td>
</tr>
</tbody>
</table>
Green Cleaning Products: Performed as Well or Better

Peroxide cleaner/disinfectant
- effective at removing dirt
- whitened grout, cleaned carpets/mIRRors
- left no residue to rinse
- eliminated restroom odors and “blue” staining

Green Seal-certified floor stripper removed old wax with less rinsing needed

Microfiber mops more effective, especially around edges
Steps to take for green cleaning pilot

- Take inventory of products you use
- Determine type of product you would like to pilot
- Create pilot project—select schools, custodial staff, and others to participate
- Invite vendors (new and existing) to present different green product lines
- Select 3 products and vendors to pilot
Steps to take for green cleaning pilot (continued)

• Develop a schedule to pilot test each of the products
• Evaluate results to determine favorite product
• Negotiate long-term contract
• Train rest of staff, roll out new products
• Communicate plans with school community on green cleaning successes
Green Cleaning Resources

Cleaning for Healthy Schools Toolkit
National Collaborative Workgroup on Green Cleaning and Chemical Policy Reform in Schools
www.cleaningforhealthyschools.org

Breathing Easier: California Success Stories
www.rampasthma.org

www.informinc.org/cleanforhealth.php

Green Cleaning: Healthier Cleaning and Maintenance Practices and Products for Schools
www.healthyschools.org

Green Cleaning Site Visit Checklist
www.informinc.org/FS_CHP_Site%20Visit%20Check%20List.pdf
More Green Cleaning Resources

Quick & Easy Guide to Green Cleaning in Schools
http://healthyschoolscampaign.org/campaign/green_clean_schools/guide.php

Janitorial Products Pollution Prevention Project offers fact sheets on safe and effective cleaning methods
http://www.wrppn.org/Janitorial/jp4.cfm

Graffiti Remover Research and Field Test Report: The Search for Safer Products
www.newdream.org/procure/Graffiti.pdf
Those who say it can’t be done
Should not interrupt those already doing it

-- Chinese proverb
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