

Green & Clean



A Guide to Greening Your Home
School, Community & Workplace

A project of the NJ Environmental Federation & Clean Water Fund

www.cleanwateraction.org/njef

www.cleanwaterfund.org

What is “Green Cleaning”?

- Use **least toxic cleaning products.**
- Maintain a **healthy level of cleanliness and disinfection.**



Green Cleaning is an Overall Philosophy



Move away from...

- **Petrochemicals:** product derived from crude oil or a petroleum distillate.

Move towards...

- **Bio-based:** product derived from renewable sources such as the extracts or oils from fruits, vegetables, plant matter, seeds, or nuts.

Why Green Cleaning?



Many common cleaning products may:

- Harm people, animals, and the environment, especially if used and exposed to every day.
- Cause a wide range of skin, respiratory, immune, allergy, cancer, and reproductive harm.

There are safer, cost effective alternatives!

If we can buy it, it must be safe, right? **No!**

- Of the 2,863 most commonly used chemicals only 7% have complete toxicity data and 43% have NO toxicity information available (www.epa.gov).
- 1 of every 3 cleaning chemicals used in schools can cause environmental or health problems (Center for a New American Dream).



Children are More Vulnerable to Toxins

- Hand-to-mouth behavior and playing close to ground.
- Faster breathing patterns, rapid growth & development.
- Many hours spent in school with air that is often 2-5x dirtier than outdoor air (USEPA).
- Higher exposures to environmental toxins, pound for pound, compared to adults.



Cleaning Products as Asthma Triggers



- Nationwide 1 in 13 children have asthma, NJ's cities are as high as 1 in 4. (UMDNJ)
- Asthma is #1 factor for school absenteeism & hospital admission among chronic conditions.
- Custodial workers experience the highest rates of occupational asthma, twice the rate for other workers. (American Journal of Industrial Medicine)
- In CA, MA, MI, and NJ, 12 percent of work-related asthma cases were associated with exposure to cleaning products.
(Journal of Occupational and Environmental Medicine)

Aren't Green Cleaners More Expensive?



NO! Many are **competitively priced** and they can also lower “soft” costs (i.e. dilution of products, using products that do “double duty”).

- **1 hospital saved \$11,000 in one year** on chrome cleaners since a “green cleaning” window cleaner also cleaned chrome.
- **Talk with current vendors** about options within your current purchasing system, such as collaborative purchasing and competitive bidding.

What to Look For...



- Non-toxic
- Biodegradable
- Phosphate Free
- Contains no dyes, chlorine or hypochlorite
- Recycled content containers
- Bulk packaging
- Natural fragrances
- Full disclosure or labeling of “active” and “inert” ingredients

What to Avoid...

- **Antibacterials**
- **Corrosives**
- **Chlorine Bleach**
- **Ammonia**
- **Phosphates**
- **Petroleum Products**
- **Fragrances**



"High Risk Ingredients"

Source: Office of the Interior

www.ofee.gov/gp/heather's%20green%20cleaners%20training.ppt

Category	Ingredient	Health Impact
Acids	Hydrochloric Acid Phosphoric Acid	Blindness Damages Skin
Caustics	Sodium Hydroxide Sodium Metasilicate Potassium Hydroxide	Blindness Damages Skin Severe irritant
Solvents	Perchloroethylene Ethanolamine Toulene HCFC-141	Cancer Poison (absorbs through skin, poisons liver and kidney) Depletes Ozone Layer
Surfactants	Alkyl phenol ethoxylates	Endocrine Disruption
Disinfectants	Sodium hypochlorite Paradichlorobenzene Quaternary Ammonium Chloride	Corrosive and Reactive Cancer Corrosive and Central Nervous System Depressant

Volatile Organic Compounds (VOCs)



Cleaning products are responsible for approximately 8% of total non-vehicular emissions of **VOCs** (Green Seal).

- **Acute Problems:** Nose and throat irritant, headache, shortness of breath, nausea, dizziness, and fatigue.
- **Chronic Problems:** Cancer, damage to organs and central nervous system.

1,4 dichlorobenzene (1,4 DCB)

- Found in toilet bowl cleaners, air fresheners, paint, and other deodorizers.
- Likely carcinogen.
- New studies link it to reduced lung function.
(Nat'l Institute of Environmental Health Sciences)
- 96% of the study group (953) had 1,4 DCB in their blood.



Antibacterials



- **In wide variety of soaps**, laundry detergents, shampoos, toothpastes, body washes, dish soaps, shaving cream and household cleaning products.
- **Encourages growth of super-resistant bacteria.**
- **Wipes out “good” bacteria**, vital for good health.
- Children not exposed to “good” bacteria may be **more prone to allergies and asthma.**
- **Have no proven benefit** over mild soap and water.

(Source: Beyond Pesticides)

American Medical Association Says...



“There is science to suggest that the use of some of these antimicrobials in consumer products can be linked to development of antibiotic resistance...We urge the FDA to evaluate the safety and effectiveness of antimicrobials in consumer products and strongly urge FDA regulation of them where resistance against antimicrobials has been demonstrated.”

Triclosan

Most “Active Ingredient” in Antibacterial Products including Shaving Cream & Toothpaste

Possible Health & Environmental Effects:

- allergies and asthma
- antibiotic resistance
- weakening of the immune system
- decreased fertility
- altered sex hormones
- birth defects
- cancer
- toxic to algae and aquatic ecosystems

(Source: Beyond Pesticides)





Green Seal Certification:

- **Is a good start**, but institutions shouldn't rely solely on their standards.
- **Allows products to contain dyes, fragrances and petro-based ingredients** that cause health risks, even though the USEPA's "environmentally preferred" cleaning products should be bio-based and not contain dyes, fragrances or petro-based ingredients.
- **Recently started** the process of restructuring their certification process.



3M Twist & Fill General Cleaner

INGREDIENTS:

Hydroxyalkyl Amine Oxides
Isopropyl Alcohol
2-Ethyl-Hexyloxyethanol

HEALTH EFFECTS:

EYE CONTACT	Severe Eye Irritation
SKIN CONTACT	Severe Skin Irritation
INHALATION	Central Nervous System Depression
	Upper Respiratory Irritation

(Source: MSDS)



Another "Green" Certification Program:

EcoLogo™

**Environmental
Choice
Program™**



www.environmentalchoice.com

EcoLogo™



- **Has been in operation since 1988**, currently has over 4,000 certified products and services approved to use the label.
- **Emerging as a leader** in North America in terms of numbers of products certified and standards for multiple cleaning applications.
- **EcoLogo** belongs to the Government of Canada and is a founding member of the Global EcoLabelling Network.
- **Unlike GreenSeal, EcoLogo** establishes stricter limits on phosphates, alkylphenol ethoxylates (hormone disruptors), chelating agents, aquatic toxicity & biodegradability.

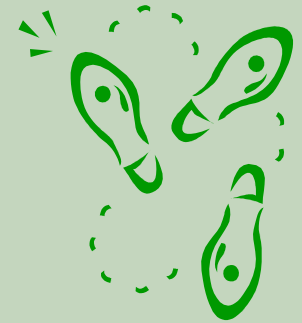
www.environmentalchoice.com

States Mandate Green Cleaning...

- **New Jersey, Jan 2006:** Executive Order #76 requiring all state properties and authorities to purchase and utilize green cleaning products.
- **New York, Jan 2006:** Law mandating green cleaners in public buildings and schools.
- **Illinois, May 2007:** Law requiring green cleaning in schools.



As a Green Cleaning Leader You...



- Reduce your environmental footprint.
- Improve the environment and safety for children, custodial/janitorial workers, and other staff.
- Get ahead of future green purchasing mandates.

Step 1: Understanding the Hazards in Your Facilities

- Create an inventory of all products in use.
- Retrieve MSDS on all those products.
- Identify the hazards according to their MSDS.



Step 2: Take Action



- Talk to suppliers to find cost-effective green alternatives that match up with your cleaning needs.
- Educate and train all custodial workers and staff.
- Implement a pilot project and evaluate results after 1 month.
- Create permanent “green cleaning” guidelines at your facilities. Sample policy available at: cleanwateraction.org/pdf/njef/greencleaningpolicy.pdf

Success Stories



- **Red Bank Primary School Switches to Green Cleaners, October 2004**

“We love the stuff,” said Jerry Sheeran, the district supervisor of buildings and grounds, who looked into the [green] products at the urging of Amy Goldsmith, NJ Environmental Federation’s State Director. “It works really well”. Sheeran said the new line of products is equivalent to or less expensive than what was used before.

Green "Alternatives" in the Home



Cleaning Categories	Alternatives
Drain Cleaner	Metal snake, plunger or baking soda, salt with white vinegar
Floor Cleaner & Shining	Vegetable based oil soap (e.g. Murphy's) in water mixture
Furniture Cleaner & Polish	Oil soap on damp cloth
General Cleaner	Oil soap; Bon Ami, a "comet" like cleanser; spot treat w/ 1% bleach as disinfectant
Glass Cleaner	50:50 white vinegar & water, newspaper to wipe
Toilet Cleaner	Soap, Bon Ami, white vinegar for buildup, 1/2 cup baking soda to freshen up

A Little Vinegar Goes a Long Way...

- Combining basic household items, such as white vinegar, baking soda, olive oil, borax, water and lemon, can work just as well as any premium-priced product.



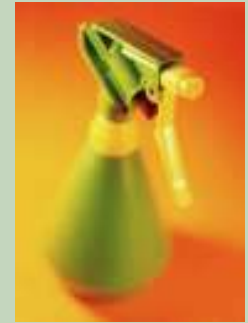
www.home-safe-home.org

Learn More



- EPA's Environmentally Preferable Purchasing Program **www.epa.gov/epp**
- EcoLogo Environmental Choice Program **www.environmentalchoice.com**
- Center for a New American Dream **www.newdream.org**
- Deirdre Imus Environmental Center **www.dienviro.com**
- Childproofing Our Communities **www.childproofing.org**
- The Green Flags Program **www.greenflagschools.org/**

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