

# Green Hardware Supplies



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Responsible Purchasing Network

Connecticut Green Purchasing Forum

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# Sustainability Goals

### Energy Management



Energy is often the largest line item on an operation's facility management bill. Monitoring and reducing excess energy use throughout your facility can lead to savings, as well as help reduce your energy costs on an ongoing basis.

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### Water Conservation



Because water is often a limited resource, and many areas restrict usage, finding ways to reduce consumption is important. Evaluating and reducing water use can help you take costs out of your utility expenses.

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### Waste Reduction



Landfill use is becoming more and more restricted, and waste removal costs continue to climb. Reducing the amount of waste your facility produces and buying products made from recycled content can help lower your facility's impact on the environment.

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### Improve Indoor Air Quality



Indoor Air Quality: Maintain the air quality in your facility by using lower VOCs, filtration and natural products. They help protect occupant health and improve employee productivity, keeping them on the job—saving you money.

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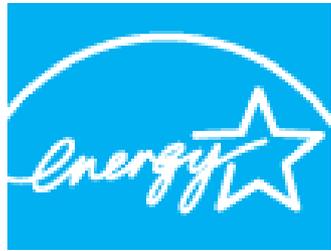


# Examples of Green Hardware Supplies



- **Energy-efficient** HVAC and Lighting Equipment
- **Water-conserving** Plumbing Fixtures and Irrigation Equipment
- **Low-toxicity** Cleaners, Paints, Hand Soaps, Deicers, Floor Polish, Lubricants and Other Building Maintenance Chemicals
- **Asthma-safe** Disinfectants
- **Rechargeable** Batteries
- **Building Materials That are Certified Low-Emitting and/or Made of Sustainable Wood or Recycled Content**
- **Recycled-content** Trash Bags and Janitorial Paper Products
- **Recycling** Containers and Systems





# ENERGY STAR Equipment

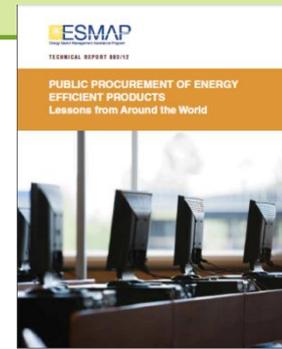
**Appliances:** washers, dryers, dishwashers, refrigerators

**Heating and cooling equipment:** furnaces, boilers, air conditioners, fans, water heaters

**Lighting equipment:** CFLs, LEDs, Fixtures.

**Miscellaneous:** food service equipment, water coolers, vending machines, battery charging systems, windows and roofing products

Go to [www.energystar.gov](http://www.energystar.gov) to find certified products.



# ENERGY STAR Most Efficient

**Find ENERGY STAR Products**

[Product Finder](#)

[How a Product Earns the Label](#)

[Save Energy at Home](#)

[Join Our Movement](#)

## ENERGY STAR Most Efficient 2014

The **ENERGY STAR Most Efficient 2014** designation recognizes the most efficient products among those that qualify for the ENERGY STAR. These exceptional products represent the leading edge in energy efficient products this year.

Learn more about the current [ENERGY STAR Most Efficient 2014 criteria](#).



### Products Recognized as ENERGY STAR Most Efficient in 2014

 <b>Clothes Washers</b> <small>Small (2.5 cu-ft and smaller)</small> <small>Large (larger than 2.5 cu-ft)</small>	 <b>Refrigerators</b> <small>Medium (18 cu-ft and smaller)</small> <small>Large (18.1 to 22.5 cu-ft)</small> <small>X-Large (larger than 22.5 cu-ft)</small>	 <b>Televisions</b> <small>Under 35 inches</small> <small>35 to 50 inches</small> <small>50+ inches</small>	 <b>Heating &amp; Cooling</b> <small>Boilers</small> <small>Central Air Conditioners/Air Source Heat Pumps</small> <small>Furnaces</small> <small>Geothermal Heat Pumps</small>
 <b>Ceiling Fans</b> <small>52 inches and under</small> <small>Over 52 inches</small>	 <b>Ventilating Fans</b> <small>Without Lighting</small> <small>With Lighting</small>	 <b>Computer Monitors</b> <small>Under 20 inches</small> <small>20 to 23 inches</small>	 <b>Windows</b> <small>Vertical Slider (Single- and Double-Hung)</small> <small>Horizontal Slider</small>



# ENERGY STAR-Certified LED Lamps



## Energy-efficient

- Use **75%** less energy than incandescent lamps
- Most are dimmable

## Long life ( $\geq 25,000$ hours rated life)

- **15X** longer than incandescent lamps
- **2-3X** longer than CFLs



## Mercury-free

- *Qualified list: [www.energystar.gov](http://www.energystar.gov)*



# High Efficiency Ballasts and Linear Fluorescent Lamps

- **Consortium for Energy Efficiency (CEE) Qualified**  
<http://library.cee1.org/content/commercial-lighting-qualifying-products-lists>



## Commercial Lighting Qualifying Product Lists

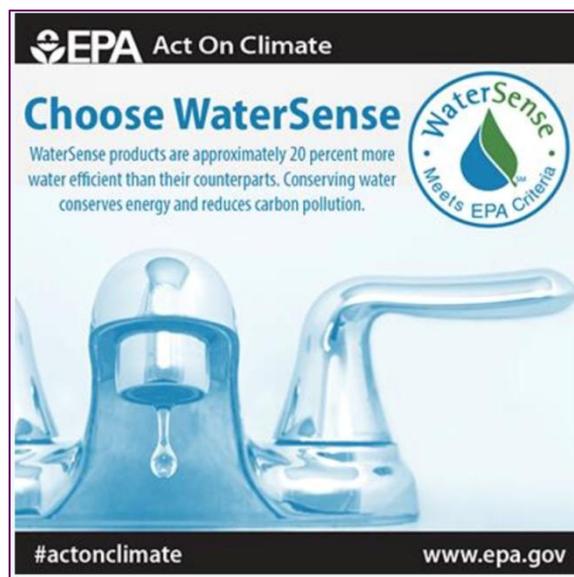
 June 2014 32W Lamps & Ballasts	855 KB
 June 2014 28W & 25W Lamps & Ballasts	854 KB

- **NEMA Premium Efficiency (Ballasts Only)**  
<https://www.nema.org/Policy/Documents/nema-premium-electronic-ballast-program.pdf>



# Water Conservation Products Save Energy and \$

Running hot water for 5 minutes  
= 60 watt bulb for 14 hours



# Certifications for **Green** Cleaning Products



**Cleaning chemicals & hand soaps**  
(Green Seal, EcoLogo  
or EPA's Design for Environment)



**Janitorial Paper Products**  
(Green Seal, EcoLogo or high post-  
consumer recycled content)



**Vacuum cleaners**  
(Carpet & Rug Institute)



# Green Seal Criteria for Institutional Cleaners (GS-37)

- **Low toxicity**
- **No cancer-causing ingredients**
- **No asthmagens**
- **Not corrosive to eyes or skin or skin sensitizer**
- **Won't pollute air or deplete ozone layer**
- **Won't kill fish**
- **Low phosphorous**
- **Will biodegrade**
- **Package recyclable**
- **Available as concentrate**
- **Limits on fragrances used**
- **Certain ingredients prohibited**
- **Performance tested**
- **Vendor training available**



# Conventional Disinfectants

## Chlorine bleach (Sodium hypochlorite)

- Causes occupational asthma
- Corrosive to eyes and skin

## Quaternary ammonium chlorides (“Quats”)

- Asthmagens
- Concentrating in sewage sludge
- Corrosive, need to be rinsed off

## Ortho-Phenyl Phenol

- Carcinogen and asthmagen

## Pine oil

- Potential respiratory/skin sensitizer



# Safer Disinfectants

Safer “active” ingredients:

- Hydrogen peroxide
- Citric/Lactic acid
  - Some formulations are broad-spectrum disinfectants
  - No carcinogens or reproductive toxins
  - No asthmagens or skin sensitizers
  - Break down in sewage
  - Irritating but not corrosive to eyes/skin



## Just Released: Comprehensive Report on Safer Disinfectant Products

April 10, 2014

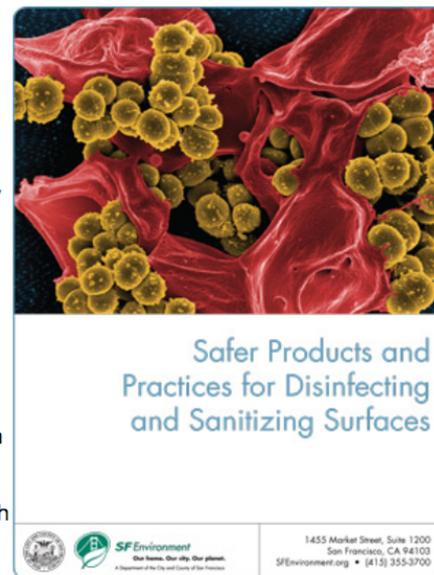
Disinfectants are essential for maintaining public health, but are also hazardous. Most common disinfectants can cause asthma, many are corrosive to eyes and skin or pose hazards to aquatic life, and some cause cancer or reproductive harm. To complicate matters, consumers cannot tell whether the products really work, since the targets are microscopic organisms.

**SF Environment, together with the Responsible Purchasing Network, has just completed a wide-ranging analysis of disinfectant products to help consumers make better choices, based on safety, germ-killing ability, compatibility with surfaces, and environmental impacts.** Researchers compared health hazards, environmental impacts, germ-killing claims, surface incompatibilities, and other factors for 11 common active ingredients, 33 representative disinfectant products and 24 surface sanitizer products. This "alternatives analysis" also considered non-chemical options such as improved cleaning practices and the use of various tools, such as microfiber mops and electrolyzed water devices.

The highest scoring products contain either **hydrogen peroxide, lactic acid, caprylic acid, or citric acid** as active ingredients. The study recommends active ingredients and specific products for general disinfection as well as for special purposes such as locker rooms (athlete's foot fungus), bloodborne pathogens (HIV and hepatitis), and stomach flu (norovirus). Other recommendations include:

- Buying products as concentrates instead of pre-diluted formulations. Concentrates weigh 1/16 to 1/256 as much as ready to use products, which means substantially less fuel is required for shipping.
- Using "closed-loop" dilution systems, which automatically mix chemicals to the correct strength while keeping concentrates inaccessible to users.
- Cleaning surfaces well, which can reduce germs by 99% or more without the use of disinfectants. Using microfiber mops and cloths can dramatically improve the effectiveness of cleaning.
- Limiting disinfectant use to high skin contact areas such as door knobs or sinks can also reduce product use without compromising public health.

[View the full report](#)



[www.sfapproved.org/just-released-comprehensive-report-safer-disinfectant-products](http://www.sfapproved.org/just-released-comprehensive-report-safer-disinfectant-products)



# Wall & Ceiling Paints

- Specify certified low-toxicity latex paints
  - ✓ Green Seal
  - ✓ EcoLogo
  - ✓ Master Painters Institute Extreme Green (X-Green)
- Certifications address performance
- Include “green” specs in painting and renovation contracts
- Require vendors to “take-back” and recycle leftover paint



Green Purchasing Best Practices:  
Architectural Paints and Coatings





Give us your tired paints, your unwanted colors, your huddled cans and pails, yearning to be used,

The wretched refuse of your reformulated coatings. Send these, the homeless, they are wanted by Amazon Paint.



# Avoid Push-back Performance Test



- Engage end-users early
- Set performance criteria
  - Should be no trade-off
- Request product samples
- Conduct pilot tests
  - Try innovative products
- Approve only what works



# RPN Green MRO Resources



**NASPO-WSCA Fact Sheet**  
**Buying Green Products on WSCA's MRO Contract with Grainger**



**WSCA Contact**  
 Gail Burchett, Purchasing Division  
 Nevada Department of Administration  
 Tel: (775) 684-0172  
[gburchett@admin.nv.gov](mailto:gburchett@admin.nv.gov)



**Grainger Contacts**  
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[www.responsiblepurchasing.org/resources/green\\_hardware\\_supplies\\_fact\\_sheets/index.php](http://www.responsiblepurchasing.org/resources/green_hardware_supplies_fact_sheets/index.php)

# Questions? Comments?



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