



Materials and Sustainable Purchasing Training Companion Guide

BEFORE you watch the training, answer the following questions:

1. What do you think are the components of a sustainable purchasing program?
2. What do you currently have in place in your school or district?

AFTER you watch the training, answer the following questions:

1. What additional aspects of sustainable purchasing did you learn during the training?
2. What will you do to begin to improve sustainable purchasing at your school or district?
3. What further information do you need to get started and where can you find it?

Green Schools: A green school creates a healthy environment that is conducive to learning while saving energy, resources and money.

Materials and Sustainable Purchasing: A sustainable purchasing policy outlines the environmentally friendly materials and products that are approved for school use. The policy should include criteria to address the purchasing and disposal of ongoing consumables, durable goods, and facility alterations and additions. Ongoing consumables are low-cost materials that are regularly used and replaced through the course of a school day. Examples include paper, plastic, glass and food waste. Durable goods are equipment, such as computers, monitors and copiers. Materials and waste related to a renovation, demolition, or new construction fall under a section of the policy that addresses facility alterations and additions. A sustainable purchasing policy should also include a matrix to make the process of evaluating materials and products flexible and practical and require a protocol for tracking purchases.

The goals of a materials and sustainable purchasing policy are to:

- Encourage the use of eco-friendly products.
- Outline a process to evaluate products and materials.
- Lessen the waste generated in the operation and maintenance of a school.

Recommended Assessments

Gathering the answers to the preliminary assessment questions below can help you determine how far along your school or district is in implementing a materials and sustainable purchasing policy. This is not an exhaustive list, but it does provide a good starting point.

Materials and Sustainable Purchasing

- Is there a sustainable purchasing policy?
- Are products specified at the school or district level?
- Are recycled-content products specified? Paper? Plastic garbage bags?
- Are locally made products purchased?
- Is the food organic, local, and/or rainforest certified?
- What kind of light bulbs are being ordered?
- Are cleaning products low-emitting?
- Are equipment and appliances specified to be ENERGY STAR rated?
- Do students eat with disposable dishes and flatware? What is it made out of?

Descriptions of the Type of Materials or Products to Specify

Ongoing Consumables

When developing the ongoing consumables section of your sustainable purchasing policy, consider criteria that specifies products be made of recycled content, rapidly renewable or regional materials, and/or be certified by the Forest Stewardship Council (FSC).

- **Recycled Content**

Recycled content can be referred to as post-consumer (what we throw away into recycling bins), pre-consumer (what a factory throws out as cuttings or extras) or simply “total recycled content”, a combination of both.

- **Rapidly Renewable Materials**

Rapidly renewable materials are agricultural products, both fiber and animal, that take 10 years or less to grow or raise and can be harvested in a sustainable fashion.

- **Regional Materials**

Regional materials are those that are harvested, processed or extracted within 500 miles of the school. The sustainable purchasing policy can stipulate that a certain percentage of the products purchased must be regional, thus reducing the need to transport and cutting down on fossil fuel use.

- **FSC-certified**

The Forest Stewardship Council or FSC certification is a market-based tool that supports responsible forest management worldwide. The FSC label ensures the forest products used are from responsibly harvested and verified sources.

Durable Goods

The durable goods section of the policy should address equipment and furniture.

- **Equipment**

The policy can specify that electric equipment, such as computers and appliances, be ENERGY STAR qualified and that purchases should replace gas-powered maintenance equipment with battery or corded equipment.

- **Furniture**

Several criteria can be considered for school furniture, including recycled content, salvaged materials, internal equipment reuse, rapidly renewable material content, and FSC-certified wood content.

Facility Alterations and Additions

Many of the same criteria for ongoing consumables and durable goods can apply to materials purchased for facility alterations and additions. Types of materials or products to consider when developing this section of the policy include:

Adhesives and sealants	Hard surface flooring
Carpet/carpet tiles	Insulation
Ceiling tiles/ceiling grid	Lighting
Doors	Millwork
Door frames	Paints and coatings
Fluorescent fixtures and bulbs	Paper
Gypsum board	Wall base

Rapidly Renewable Materials

Establish goals for the use of rapidly renewable materials in any facility alterations or additions. Examples of products made of rapidly renewable materials include:

- Bamboo flooring
- Cotton batt insulation
- Cork flooring
- Linoleum flooring
- Sunflower seed board
- Wheat board for cabinetry

Regional Materials

Establish that construction-related purchases contain at least 50% material harvested and processed or extracted within 500 miles of the school.

FSC-certified Wood

Establish a policy where at least 50% of the wood purchased is Forest Stewardship Council (FSC) certified. Wood products that are FSC will have a Chain of Custody (COC) certificate number that will be included on the invoice. When using new wood-based products that are FSC-certified, you support environmentally responsible forest management. The negative impacts of irresponsible forest practices can include forest deconstruction, wildlife habitat loss, soil erosion, water and air pollution and waste.

Volatile Organic Compounds

VOCs are carbon-based chemicals that easily evaporate at room temperature. Breathing low levels of VOCs for long periods of time may increase some people's risk of health problems. Common symptoms of exposure to VOCs include eye, nose and throat irritation; headaches; nausea; dizziness; and worsening of asthma symptoms. Note: links to the certification programs outlined below can be found in the Resources section.

Low VOC Adhesives and Sealants

Establish a policy that all adhesives and sealants are low VOC. They should have a VOC content less than the current VOC content limits of SCAQMD Rule #1168.

Low VOC Paints and Coatings

Paints and coatings have VOC emissions not to exceed VOC and chemical component limits of Green Seal's GS-11 requirements.

Low VOC Hard Surface Flooring

Hard surface flooring to be FloorScore certified. This includes vinyl, linoleum, laminate flooring, wood flooring, ceramic tile, rubber flooring, and wall base.

Low VOC Carpet

Carpet/Carpet tiles meet the requirements of Carpet & Rug Institute (CRI) Green Label Plus and/or NSF-140 certification.

Low VOC Furniture

Furniture should have low VOC's and be certified by GREENGUARD for Children & Schools or BIFMA-level certification

Low VOC Composite Wood

Establish a policy that addresses all composite panels (medium-density fibreboard, particle board, oriented strand board) and agrifiber products contain no added urea formaldehyde resins. Look for the "NAUF" reference on composite wood products; it stands for "no added urea-formaldehyde".

LEED Certification: A Way to Define Green for New and Existing Schools

In 2000, the U.S. Green Building Council (USGBC) established the LEED® rating system as a way to define and measure “green buildings.” In school terms, LEED is like a report card for buildings, demonstrating to the community that a facility is built and/or operated in a way that supports the health and well-being of occupants and saves energy, resources and money. LEED is an internationally recognized certification system that measures how well a building performs using several metrics:

- sustainable land use
- energy savings
- water efficiency
- CO₂ emissions reduction
- improved indoor environmental quality
- stewardship of resources

LEED provides a concise framework for identifying and implementing practical and measurable green building solutions. Based on established sustainable building practices and emerging concepts, the LEED rating systems are performance-based and comprehensive in scope. Points are awarded on a 100-point scale, and credits are weighted to reflect their potential environmental impacts. Different levels of certification are granted based on the total number of earned points. The four progressive levels of certification are: Certified, Silver, Gold and Platinum.

Once the credits are implemented and the energy-efficiency and performance requirements met, the final step for certification is submitting the project certification documentation using the Web-based LEED Online system. The Green Building Certification Institute (GBCI) reviews the application and provides feedback. If all requirements are met, GBCI awards LEED certification to the building.

LEED Rating Systems:

LEED® for New Construction & Major Renovations™

LEED® for Existing Buildings: Operations & Maintenance™

LEED® for Commercial Interiors™

LEED® for Core & Shell™

LEED® for Schools™

LEED® for Neighborhood Development™

LEED® for Homes™

LEED® for Retail™

LEED® for Healthcare™

Green Building Certification Institute (GBCI)

Established in 2008, GBCI is the institution that grants both project certification and professional credentials that recognize excellence in green building performance and practice. GBCI administers project certification for commercial and institutional buildings and tenant spaces under USGBC's LEED rating systems. GBCI also manages the professional credentialing programs based upon the LEED rating systems, including the LEED Green Associate and LEED AP credentials.

How Much Does LEED Cost?

The cost to certify a school facility is based on the project's square footage. The process provides a comprehensive third-party review of the energy and environmental performance of the school and ensures that the stated goals of the project are met.

The cost to register and certify at 100,000-square-foot school for USGBC members is less than \$4,000 using LEED for Existing Buildings: Operations & Maintenance, and less than \$5,500 using LEED for Schools.

Prices are determined by GBCI and are subject to change. For complete pricing information, visit www.gbci.org.

Glossary

Biodegradable Product: Biodegradable cleaning products use organic material such as plant and animal matter and other substances originating from living organisms. These products break down through natural processes.

Environmentally Preferable Product: Environmentally preferable products are certified by a third-party environmental label, such as Green Seal or EcoLogo. The label indicates that the product and its packaging were developed based on a consideration of human health and safety, ecological toxicity, environmental impacts, and resource conservation.

Low-emitting Materials: Low-emitting materials are products that do not release significant pollutants into the indoor environment. These products contain zero- and low-volatile organic compounds (VOCs).

NSF International: NSF is an independent organization that certifies products and writes standards for food, water and consumer goods to minimize adverse health effects and protect the environment.

Volatile Organic Compounds (VOCs): VOCs are carbon-based chemicals that easily evaporate at room temperature. Breathing low levels of VOCs for long periods of time may increase some people's risk of health problems. Common symptoms of exposure to VOCs include eye, nose and throat irritation; headaches; nausea; dizziness; and worsening of asthma symptoms.

LEED for Existing Buildings: Operations & Maintenance Rating System Credits Related to Sustainable Materials

The LEED for Existing Buildings: Operations & Maintenance rating system credits that apply to sustainable materials fall under the Materials & Resources (MR) credit category.

MR Prerequisite 1 – Sustainable Purchasing Policy

Reduce the environmental impacts of materials acquired for use in the operations, maintenance and upgrades of buildings. Have in place an Environmentally Preferable Purchasing (EPP) policy that includes product purchasing policies for the building and site.

MR Credit 1 – Sustainable Purchasing: Ongoing Consumables

Develop and maintain a sustainable purchasing program covering materials with a low cost per unit that are regularly used and replaced through the course of business.

MR Credit 2 – Sustainable Purchasing: Durable Goods

Develop and maintain a sustainable purchasing program covering items available at a higher cost per unit and durable goods that are replaced infrequently and/or may require capital program outlays to purchase.

MR Credit 3 – Sustainable Purchasing: Facility Alteration and Additions

Develop and maintain a sustainable purchasing program covering materials for facility renovations, demolition, retrofits and new additions.

MR Credit 4 – Sustainable Purchasing: Reduced Mercury in Lamps

Develop and maintain a lighting purchasing plan that specifies maximum levels of mercury levels of mercury-containing lamps purchased for the building and associated grounds.

MR Credit 5 – Sustainable Purchasing: Food

Achieve sustainable purchases of at least 25% of total combined food and beverage purchases (by cost) during the performance period.

U.S. Green Building Council Publications and Resources

Green Existing Schools Implementation Workbook (PDF)

The *Green Existing Schools Implementation Workbook* includes sample policies, programs, and plans; data collection forms and tables; and sample surveys.

Green Existing Schools Project Management Guide (PDF)

The *Green Existing Schools Project Management Guide* includes general guidance on navigating the LEED for Existing Buildings: O&M certification process, including how to conduct personnel and organizational assessments, educate and train staff, initiate the certification process, and manage a school or district-wide sustainability program.

LEED 2009 for Existing Buildings: Operations & Maintenance Project Checklist (XLS)

The LEED Project Checklist is a scorecard to track the credits being pursuing toward certification.

LEED 2009 for Existing Buildings: Operations & Maintenance Rating System (PDF)

The LEED 2009 for Existing Buildings: Operations & Maintenance rating system summarizes the intent, requirements, and technologies/strategies for each credit.

[Sustainable Purchasing Tracker – Materials and Resources](#)

[Sustainable Purchasing Tracker – Indoor Environmental Quality](#)

[Solid Waste Management Tracker](#)

[Occupant Commuting Survey - Summary Table](#)

The publications and resources can be found at the Centers for Green School's Green Existing Schools Toolkit at www.centerforgreenschools.org/k12toolkit.

Questions?

The Center for Green Schools at USGBC has assembled a panel of experts, facilities staff, and school district sustainability officers, to answer your questions. Please email schools@usgbc.org with the subject line "Green Existing Schools," and we will promptly connect you with a peer who can help you find the answer.

Materials and Sustainable Purchasing References and Resources

Build It Green

<http://www.builditgreen.org/>

Building Green

<http://www.buildinggreen.com/>

Business and Institutional Furniture Manufacturer's
Association (BIFMA) Level

<http://levelcertified.org/>

Carpet & Rug Institute Green Label Plus

<http://www.carpet-rug.com>

The Center for Green Schools at USGBC

<http://www.centerforgreenschools.org/>

FSC-certified Wood

<http://www.fscus.org>

Green Building Certification Institute (GBCI)

<http://www.gbci.org>

GREENGUARD

<http://www.greenguard.org>

Green Existing Schools Toolkit

www.centerforgreenschools.org/k12toolkit

Green Seal

<http://www.greenseal.org>

NSF-140

<http://www.nsf.org/business/newsroom/pdf/Sustainability2.pdf>

NSF International

www.nsf.org

Resilient Floor Covering Institute

http://www.rfci.com/int_FloorScore.htm

Scientific Certification Systems (SCS) Certified Products

<http://www.scs-certified.com>

South Coast Area Quality Management District (SCAQMD #1168)

<http://aqmd.gov/>

U.S. EPA Comprehensive Procurement Guidelines

www.epa.gov/cpg

The EPA's Comprehensive Procurement Guidelines (CPG) program is part of EPA's continuing effort to promote the use of materials recovered from solid waste. Buying recycled-content products ensures that the materials collected in recycling programs will be used again in the manufacture of new products.

U.S. EPA ENERGY STAR
<http://www.energystar.gov>

U.S. EPA ENERGY STAR for K-12 Schools
<http://www.energystar.gov/k-12>

U.S. EPA, Mercury
<http://www.epa.gov/mercury>

U.S. Green Building Council (USGBC)
<http://www.usgbc.org>