



Mission

The Green Building Program of Montgomery County Public Schools provides leadership in energy and environmental design for all schools and staff.

The program advocates environmental stewardship and resource conservation through intelligent design, technology pilots, high performance green design training, and design standard reviews for effectiveness and adoption of latest technologies and strategies.

Contact:

Anja S. Caldwell, LEED accredited Architect
Green Building Program Manager of the Green Schools Focus within the DFM

Training and Outreach

- Green User Education Programs
- Educational Outreach with school competitions and at county and school fairs (e.g. Going Green At Home)
- Classroom visits
- High Performance Design Training
- High Performance Design Reviews
- High Performance Advocacy and Mentorship to other school districts

Presentations to

- Greening the Schools – Turner Construction and Haverford College, PA
- Prince Georges County – BOE and County Council
- St. Mary's County – Superintendent and Directors
- Howard County – CEO of Facilities
- National GreenBuild Conference in Pittsburgh 2003
- Three regional symposia on green school design for Environmental Law Institute and 21st Century School Fund in DC
- EcoBuild 2005 – Workshop on High Performance Schools
- Montgomery County Council – Technical Green Building Committee of all MC agencies

Resources:

- www.greenschoolsfocus.org – Green Building
- MCPS High Performance Architectural Design Guidelines
- MCPS High Performance Green Design Plan
- Powerpoints on Green Building, LEED, Pilot Projects
- Annual Resource Conservation Plan
- SERT Handbook for Resource Conservation

Affiliations:

- Member of National US Green Building Council and local USGBC Chapter for the National Capital Region - Anja S. Caldwell is on the national core committee for the development of the LEED Application Guide for Schools for the US Green Building Council, together with members from CHPS (Collaborative for High Performance Schools) and other school districts in CA, PA, NC, NJ and OR. The guide will go into a pilot on November 2006, at the national GreenBuild Conference in Denver, CO.
- Member of CEFPI
- Green Building Advisory for Montgomery County Council

Press:

- The Gazette August 2006, ["Elementary school is a go for green - MCPS hopes new Great Seneca Creek will be an environmental pioneer in state"](#) by Melissa A. Chadwick
- District Administration Magazine, August 2006 ["The Grass is Greener on this Side- the Top Five Ways to be Green"](#), by Angela Pascopella
- School Construction News May/June 2006 – ["Raising the Bar"](#) Q& A with Anja S. Caldwell
- School Construction News May/June 2006, ["The Emerging Role of Portable Classrooms in Sustainable Design"](#) by Tom Hardiman
- School Construction News May/June 2006, ["MCPS Portable Classroom Design Challenge"](#)
- Washington Post, ["Fighting our Flush Fixation"](#) by Elizabeth Williamson, June 3rd, 2006
- MCPS – Website ["Northwood HS Teacher wins Awards"](#)
- American Schools and Universities Magazine, ["Slowing the Flow"](#) by Mike Kennedy
- School Planning and Management Magazine, ["Shades of Green"](#) by Michael Flickes
- The Washington Times, ["Conservation Lesson"](#) by Christian Toto
- Rebuild America Website, ["Maryland District Focuses on Green Schools"](#)
- Sustainable DC Website – Sustainability Outlook - ["Schools Going Green"](#)
- Germantown Gazette , ["New School Going Green"](#) by Ellen Shiau



MCPS Green Building Program - Events Calendar 2006:

April 17th to April 24th - CEFPI National School Building Week

- April 18 2006 **Historic Schools Day**
- MCPS Portable Classroom Design Jury**
with National Experts for High Performance School Design from the CEFPI
and USGBC
Bethesda Chevy Chase High School - Art Atrium
4301 East-West Highway
Bethesda, MD 20814
9:00 am – 4:30 pm
- April 19, 2006 **Senior Citizens in Schools Day**
- April 20, 2005 **Schools as Centers of Community Day**
- School Building Week Reception**
U.S. EPA Children's Environmental Health Excellence Awards
- April 21, 2005 **School Building Day**
- Walking School Bus**
- School Building Week Awards Ceremony**
School of the Future Design Competition
American Federation of Teachers Building
Fourth Floor Conference Center
555 New Jersey Avenue, NW
Washington, DC 20001
10:00 am – 11:45 am
- Lunch and Green Building Tour**
National Association of Realtors Building
Main Lobby
500 New Jersey Avenue, NW
Washington, DC 20001
12:00 noon – 1:30 pm
- April 24, 2006 **Healthy Schools Day**
- Symposium on High Performance School Design**
11:00 am to 5:00 pm
sponsored by Virginia Sustainable Building Network, MCPS Green Building Program, CEFPI, EPA
and USGBC Chapter of the National Capital Region
- The awards will be presented to the competition winner for the college and professionals category
and Anja S. Caldwell will present the MCPS Green Building Program in a break-out session in the
afternoon.

April 24, 2006

Evening Lecture by German School Architect Stefan Behnisch

6:00 pm to 7:30 pm

Metropolitan Washington Council of Governments

777 North Capitol St., NE, 3rd floor

Washington, DC 20002

sponsored by Virginia Sustainable Building Network, MCPS Green Building Program, CEFPI, EPA and USGBC Chapter of the National Capital Region

The awards will be presented to the competition winner for the college and professionals category and Anja S. Caldwell will present the MCPS Green Building Program in a break-out session in the afternoon.

MCPS Portable Classroom Design Challenge Events

January 7 to April 28

MCPS Portable Classroom Design Challenge

– Architectural Competition for K-12, college students and professionals in three categories. See website for competition program at:

<http://www.mcps.k12.md.us/departments/facilities/greenschoolsfocus/dc.html>

April 19th to April 28th

Exhibition of Competition Entries

open to the public at Bethesda Chevy Chase HS – Art Atrium

April 19th

Opening Reception with announcement of winners

10:00 am at Bethesda Chevy Chase High School – Art Atrium

LEED related Events

July 2006

Sneak Preview Tour of Great Seneca Creek ES

September 13th, 10 am

Tour of Great Seneca Creek ES

August 2006

Opening of first LEED school for MCPS and in Maryland - Great Seneca Creek ES in Germantown

October 10th, 2006

AIA Tour of Great Seneca Creek ES, 4pm to 5:30 pm

November 2006

Release of LEED Application Guide for Schools at National GreenBuild Conference in Denver, CO

Green Building Technology Pilots at MCPS – List of locations available on request

Sustainable Sites

- Vegetated Roof
- Pervious Paving
- Native and non-invasive Plantings
- Educational Gardens
- Bioretention
- Cisterns
- Raingardens
- Now-Mow Zones
- Energy Star White Roofs
- Schoolyard Habitat Projects
- Composting

Water Efficiency

- Low-Flow Faucets and Showerheads
- Waterless Urinals
- Dual Flush Technology
- Irrigation Control

Energy Conservation

- Building Envelope Improvements
- Low-e Fiberglass windows
- Cool Daylighting
- Re-lamping
- Interior and Exterior Lighting Controls
- Lighting Standardization
- Occupancy Sensors
- Geothermal Hydronic Heat Pumps
- High Efficiency Boilers
- Plug Load Control
- Energy Recovery
- On site energy generation – Solar and Wind
- Green Power Procurement
- Energy Star Appliances
- Energy Star Design
- User Education Programs

Materials

- Consumer Recycling
- Construction Waste Recycling
- Use of Local Materials
- Recycled Content Materials
- Low emitting paints, sealants and adhesives
- Formaldehyde free insulation
- Formaldehyde Free Wood Composites
- Use of Forest Stewardship Council Certified Wood

Operations

- Integrated Pest Management
- Green Cleaning Equipment
- Healthy, High Performance Cleaning Initiative
- Tools for Schools IAQ Management

First Public LEED School in Maryland - Great Seneca Creek ES in Germantown

The new elementary school in Germantown is registered for a certification as the first public LEED School in Maryland.

LEED stands for Leadership in Energy and Environmental Design and is a rating system from the US Green Building Council. The system provides a checklist for the design process in the categories of Sustainable Sites, Water Efficiency, Energy and Atmosphere, Material and Resources, Indoor Environmental Quality and Design Innovation.

The more points the project is able to achieve in the six categories, the higher the ranking and third party certificate, from a basic LEED certification to Silver, Gold and Platinum.

A design charrette conducted in 2003 with members from the MCPS Department of Facilities Management and national green building experts determined the energy and environmental design goals for this pilot project.

Some of the environmental design features of the project are e.g. 43% savings in water with low-flow appliances, including flushless urinals and dual flush options for toilets. The school has a geothermal system with all the piping buried under the athletic field. The constant ground temperature will provide heat in the winter and cooling in the summer. This "free" energy is expected to save about \$0.45 per sq. ft. a year in energy use and maintenance. The building also has a white Energy Star roof, which helps avoid the Heat Island Effect- the heating of the atmosphere through dark surface. This will reduce the air conditioning load of the building, as most schools at MCPS are now used throughout the year.

A comprehensive touchscreen information kiosk will be located in the lobby. This presentation will be tied into a keyed building tour that will explain the green and LEED related features of the building to students, staff and community members. Signs will be posted in all the classrooms, by the windows and at mechanical rooms as an educational and informative tool.

The signs can be customized by the students, as this building will function as a 3D textbook with active student involvement in MCPS' SERT program. User Education and behavior is an important factor in energy use and can make an average difference of 15% on the utility bills of a school.

More information on this pilot and the Green Building Program at MCPS is available on the MCPS Green Schools Focus website www.greenschoolsfocus.org - Green Building.

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