MISSION

The Green Building Program of Montgomery County Public Schools provides leadership in energy and environmental design. The program advocates environmental stewardship and resource conservation through intelligent design, technology pilots, high performance design training and innovative strategies.

1ST LEED PILOT SCHOOL

The new 84,000 sf elementary school in Germantown is certified 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 the Council- 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 green building experts determined the energy and environmental design goals for this MCPS pilot project.

MCPS Green Building Program

Department of Facilities Management - DOC
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Phone 240-314-1095, Fax 240-314-1036
www.schools2green.org

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School Contact:
Principal Gregory Edmundson
13010 Dairymaid Drive, Germantown, MD 20874
Phone 301-353-8500
www.greatsenecacreekes.org

MORE GREEN SCHOOLS RESOURCES:

LEED - Leadership in Energy and Environmental Design
US Green Building Council – www.usgbc.org

MCPS Student Resource Conservation Programs
www.GreenSchoolsFocus.org

Maryland Green Schools Award Program
www.maeoe.org

Schoolyard Habitat
US Fish and Wildlife Service - www.fws.gov

Great Seneca Creek Elementary School in Germantown

Green Building MCPS

Schools2Green.org

GREEN TECHNOLOGY AT GREAT SENECA CREEK ES

SITE

Land use and planning a sustainable building site is fundamental for future generations.

- Erosion control during construction
- Reduced site disturbance
- Development and building footprint
- No mow grass and meadows
- Native and non invasive vegetation
- Wetland restoration/protection
- Light pollution reduction on site and in the building
- Schoolyard Habitat project *
- Rain gardens *

WATER

Native vegetation and low-flow and efficient plumbing fixtures reduce fresh water need by 43%.

- Waterless urinals
- Dual-flush toilets
- Low-flow faucets and showerheads
- No irrigation and native vegetation

ENERGY

Energy efficient design with natural lighting and ground source heat pumps reduce energy costs and our impact on the environment.

- Geothermal energy system
- Large windows for natural light & winter heating
- Light-colored reflective roofs reduce cooling load
- Energy-Star compliant
- 100% Green Power procurement
- Energy Management System (EMS)
- Efficient building envelope
- User Education Program - SERT
- Lighting standardization

MATERIALS

Taking advantage of recycling opportunities will save money and help conserve natural resources.

- Recycling program
- Wheat board casework
- Recycled materials for toilet partitions
- 90% Construction waste recycled
- Use of local materials within 500 miles
- Use of Forest Stewardship Council Certified Wood

INDOOR ENVIRONMENT + HEALTH

By carefully choosing materials and fostering good ventilation we provide a healthy and safe environment for the occupants of the building.

- Materials, paints and finishes that emit fewer toxic fumes (low VOC)
- Promoting healthy indoor air quality through effective ventilation
- Practices that discourage mold, dust and mites
- Green Housekeeping Initiative
- No fumes from idling buses
- Elimination of CFCs, HCFC's and halons
- Large windows for outdoor views
- Integrated Pest Management
- Tools for Schools IAQ
- Formaldehyde free materials

* Future Community Projects

The building has low-flow fixtures that achieve 43% savings in potable water, including no-flush urinals and dual flush options for toilets in the Kindergarten classrooms that has been color coded by the kids.
The school has a geo-exchange system with all the piping buried under the athletic field. The constant ground temperature of 58°F provides heat in the winter and cooling in the summer. This "free" energy is expected to save about $0.50 per square foot a year in energy cost and maintenance.
The buildings roof is a white Energy Star roof, which helps reduce the Heat Island Effect- the heating of the atmosphere through dark surfaces. This will reduce the air conditioning load as most of MCPS buildings are now operating throughout the year. The utility savings in this school are expected to be more than $ 50,000 a year.
During construction more than 90% of the waste has been recycled and extra care given to protect the site and soil. The duct work was protected and sealed from dust and debris during construction at all times.

An information kiosk is located in the lobby and a website holds all the green information, including a virtual tour of the school narrated by the students. A keyed building map explains the green and LEED related features of the building to students, staff and community members on site. Signs are posted in all the classrooms, by the windows, restrooms and at mechanical rooms as an educational tool for students, teachers and parents. Signs outdoors explain no-mow areas, wetland, native vegetation and geothermal field.
The signs can be customized by the student's environmental club, as this building will function like a 3D textbook with active student involvement. User education and behavior modification can make a difference of more than 15% for the utility bills of a school.