



2015-2016 School Nominee Presentation Form

ELIGIBILITY CERTIFICATIONS

School and District's Certifications

The signatures of the school principal and district superintendent (or equivalents) on the next page certify that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of their knowledge. *In no case is a private school required to make any certification with regard to the public school district in which it is located.*

1. The school has some configuration that includes grades Pre-K-12.
2. The school has been evaluated and selected from among schools within the Nominating Authority's jurisdiction, based on high achievement in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental education.
3. Neither the nominated public school nor its public school district is refusing the U.S. Department of Education Office of Civil Rights (OCR) access to information necessary to investigate a civil rights complaint or to conduct a district wide compliance review. The Department of Defense Education Activity (DoDEA) is not subject to the jurisdiction of OCR. The nominated DoDEA schools, however, are subject to and in compliance with statutory and regulatory requirements to comply with Federal civil rights laws.
4. OCR has not issued a violation letter of findings to the public school district concluding that the nominated public school or the public school district as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan to remedy the violation.
5. The U.S. Department of Justice does not have a pending suit alleging that the public school or the public school district as a whole has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
6. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the public school or public school district in question; or if there are such findings, the state or public school district has corrected, or agreed to correct, the findings.
7. The school meets all applicable federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

U.S. Department of Education Green Ribbon Schools 2015-2016

Public Charter Title I Magnet Private Independent Rural

Name of Principal: **Mr. Cary Dimmick**

(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in the official records)

Official School Name: **Sligo Middle School**

(As it should appear on an award)

Official School Name Mailing Address: 1401 Dennis Ave., Silver Spring, MD 20902

County: Montgomery State School Code Number: 150778

Telephone: 301-649-8121 Fax: 301-649-8145

Web site/URL: <http://www.montgomeryschoolsmd.org/schools/sligoms/> E-mail: cary_dimmick@mcpsmd.org

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate.

Date: 1/27/2016

(Principal's Signature)

Name of Superintendent: **Mr. Larry A. Bowers**

(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in official records)



District Name: **Montgomery County Public Schools**

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate.

Date: 1/27/2016

(Superintendent's Signature)

Nominating Authority's Certifications

The signature by the Nominating Authority on this page certifies that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of the Authority's knowledge.

1. The school has some configuration that includes grades Pre-K-12.
2. The school is one of those overseen by the Nominating Authority which is highest achieving in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.
3. The school meets all applicable federal civil rights and federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

Name of Nominating Agency: **Maryland State Department of Education**

Name of Nominating Authority: **Jack R. Smith, Ph.D.**

(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

I have reviewed the information in this application and certify to the best of my knowledge that the school meets the provisions above.

2/4/16

Date:

(Nominating Authority's Signature)

SUMMARY AND DOCUMENTATION OF NOMINEE'S ACHIEVEMENTS

Provide a coherent summary that describes how your school is representative of your jurisdiction's highest achieving green school efforts. Summarize your strengths and accomplishments in all three Pillars. Then, include concrete examples for work in every Pillar and Element. Only schools that document progress in every Pillar and Element can be considered for this award.

SUBMISSION

The nomination package, including the signed certifications and documentation of evaluation in the three Pillars should be converted to a PDF file and emailed to ed.green.ribbon.schools@ed.gov according to the instructions in the Nominee Submission Procedure.

OMB Control Number: 1860-0509

Expiration Date: March 31, 2018

Public Burden Statement

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. The valid OMB control number for this information collection is 1860-0509. Public reporting burden for this collection of information is estimated to average 37 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The obligation to respond to this collection is required to obtain or retain benefit P.L. 107-110, Sec. 501, Innovative Programs and Parental Choice Provisions. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, 400 Maryland Ave., SW, Washington, DC 20202-4536 or email ICDocketMgr@ed.gov and reference the OMB Control Number 1860-0509. Note: Please do not return the completed ED-Green Ribbon Schools application to this address.

Lead Applicant Name: Ms. Laurie Jenkins
Lead Applicant Email: Laurie_C_Jenkins@mcpsmd.org
Phone Number: 301-924-3123

Does your school serve 40% or more students from disadvantaged households? **YES**
Percent receiving FARMS: **43.86 percent**
Percent Limited English Proficient: **13.1%**
Overall annual student attendance rate: **95.92 percent**
Public School 6-digit Code: **150778**

School District Name: **Montgomery County Public Schools (MCPS)**
Size rank: 17th largest in the nation
Total student enrollment: **156,447**

Summary Narrative

Sligo Middle School (Sligo MS) has a very diverse student body, and approximately 45 percent of our 623 students receive free and reduced meals. Sligo MS shares its name with Sligo Creek, which runs adjacent to the school, not far from downtown Silver Spring. The Sligo Creek watershed is part of the Anacostia Watershed, which is a target area for improvement of water quality by the Montgomery County Department of the Environment. Sligo students are learning more and becoming actively involved in improving the state of Sligo Creek and its watershed. We are very proud of our progress on the path to become a model watershed steward school.

When we began the process of becoming environmentally conscientious three years ago, we worked diligently to make changes within our building with support from our students and staff. We had a long way to go. Teachers left lights on throughout the day, Promethean Boards remained fully on and visible while not being used, and recycling bins were not labeled correctly or visibly. Our School Energy and Recycling Team (SERT) students became organized and very active that year, collecting recycling materials weekly and properly placing those materials in the correct receptacles, visiting classrooms to turn off lights and computers, and reforming our recycling practices for all of our staff and students.

We also sought out internal and external partners that could help us offer more outdoor environmental education experiences for students, especially those that would foster the health of our local watershed, such as MCPS Outdoor Environmental Education Programs, the Tower Companies (2013 Green Apple Service Day), Montgomery County Department of Environmental Protection, and the Audubon Naturalist Society – GreenKids Program. In year two of our effort, with those partnerships in place, we focused on new efforts to connect all of our students through our environmental literacy curriculum to the Sligo Creek watershed. Among those initiatives, all Grade 8 students were able to conduct stream quality testing of Sligo Creek, and an outdoor classroom with gardens in our courtyard was installed where students learn outside year-long. The Grade 6 teachers invested many professional development hours in the Trout in the Classroom program, and brought this project based learning opportunity to all grade 6 students. All of this work culminated in our certification as a Maryland Green School in May, 2015.

We were so fortunate to have been awarded a Science, Technology, Engineering, Art, and Mathematics (STEAM) grant in late 2014 that has provided additional opportunities for our students to collaborate in teams, and incorporate 21st century skills and competencies (focus areas: creativity, innovation, critical thinking, problem solving, community and team work) they need to learn and help support the environment. STEAM learning activities provide an engaging and relevant platform to develop these skills and competencies. The planned elements of the program include outdoor adventure, artistic creation, scientific exploration, and the process of meaningful multi-media communications; all are integrated through a project based learning approach. Culminating a year of work of 30 students, Sligo Middle School students and teachers hosted the "S"TEAM Sligo Community Day Festival, an event to bring together staff, students and the community to learn more about the outdoor environment surrounding the school, which includes Sligo Creek - a tributary in the Anacostia Watershed. Community Day was a huge success, with local press coverage and participation from members of Montgomery County's County Council and Montgomery County Public School's Board of Education. The work of these Sligo students had a far reaching affect, encouraging students, staff and the community as a whole to care about the environment and inspiring other educators to provide similar experiences for their students.
<http://news.montgomeryschoolsmd.org/tv/sligo-ms-students-staff-learn-about-the-environment/>

These are just a few of the current environmental initiatives in our school that we continue to grow to reach more students and help improve the state of our local watershed. We are proud of how our staff, students, and community are embracing strong, responsible green behaviors and healthy living. We will continue to look for new and better ways to model and teach our students to be life-long earth-stewards who value and care for their environment.

Green School Participation

Describe your school's participation in a local, state, or nationally recognized green school program which asks you to benchmark progress in some fashion, e.g., MAEOE Green School Program, National Wildlife Federation Eco-Schools USA, Green Schools Alliance, Collaborative for High Performance Schools, or Project Learning Tree's Green Schools.

Sligo MS began a partnership with the GreenKids Organization in the fall of 2013. We collaborated on projects such as environmental field trips, classroom lessons focused on ecology and sustainability, School Energy and Recycling Team (SERT) activities, and Science Night events.

During that same time, Sligo MS established a partnership with the Audubon Naturalist Society to teach students Enviroscape lessons, test the water quality at Sligo MS, collect litter in the Sligo MS community, and create a trash timeline. We also conducted a compost experiment with students.

This work, with the assistance of MCPS' SERT program and external partners, has helped Sligo MS become a Maryland Green School.

Sligo MS partners and works very closely with the MCPS School Energy and Recycling Team (SERT) program.

List awards and/or grants, and the years in which they were received, your school, staff, or student body received for environmental or sustainability stewardship/action. (Maximum 100 words)

- 2013 Annual Recycling Award
- 2013 Q1 and Q3 SERT Energy Savings Award
- 2014 Q1 SERT Energy Savings Award
- 2014 June Got Paper Contest Award Winner
- 2014 Annual Recycling Award- event was televised school wide to celebrate the accomplishment and to further encourage sustainability efforts
- 2014 GreenKids Partnership Award
- 2014 MAEOE Green School Certification
- 2015 Q1 SERT Energy Savings Award
- 2015 Annual Recycling Award

For three consecutive school years, Sligo MS has received SERT program awards for reducing energy consumption.

Pillar I: Reduce Environmental Impacts and Costs

Can your school demonstrate a reduction in Greenhouse Gas emissions?

Yes or No

Percentage reduction

Over (m/yr – m/yr)

Initial GHG emissions rate (MT eCO₂/person)

Final GHG emissions rate (MT eCO₂/person)

Offsets

How did you calculate the reduction?

YES

Percentage reduction: **4.16 percent**

Over **(07/2004 – 06/2015)**

Initial GHG emissions rate (MT eCO₂/person): **1.86**

Final GHG emissions rate (MT eCO₂/person): **1.80**

Offsets: **NONE**

How did you calculate the reduction? **Using utility database records**

Note: At Sligo MS, for the years FY15/FY14, MCPSE enrollment increased by 20 percent and GHG emissions decreased by 22 percent.

Do you track resource use in EPA ENERGY STAR Portfolio Manager?

Yes or No **YES**

If yes, what is your score? **76**

If your score is greater than 75, have you applied for and received ENERGY STAR certification? **NO**

If yes, what year?

Has your school reduced its total non-transportation energy use from an initial baseline?

YES

Current energy use (kBtu/student/year): **12,367**

Current energy usage (kBtu/sq. ft./year): **51.85**

Percentage reduction: **We experienced a 3 percent reduction per student and a 4 percent reduction per square foot.**

Over time period **(07/2004 – 06/2015)**

How did you document this reduction? **Using utility database records**

Provide the percentage of your school's energy that is obtained from:

On-site renewable energy generation: **Yes**

Type generated: Solar*

Purchased renewable energy **Yes**

Type purchased: **Wind Energy 33 percent**

Participation in USDA Fuel for Schools, DOE Wind for Schools or other federal/state school energy program

* SunEdison photovoltaic is operational in January of 2016 with an estimated production of 372.6 MWh/yr.

In what year was your school originally constructed?

Year: **1959**

What is the total building area of your school? **149,527 ft²**

Has your school constructed or renovated buildings in the past ten years?

No renovation or construction in the past ten years.

For new buildings: **N/A**

Percentage of building area that meets green building standards **0%**

Certification and year received = **N/A**

For renovated building(s): **NO**

Percentage of the building area that meets green building standards = **N/A**

Certification and year received = **N/A**

Total renovated area = **N/A**

Can you demonstrate a reduction in your school's total water consumption from an initial baseline?

YES

Average baseline (FY2004) water use (gallons/occupant) **1.86 kGal/student**

Current (FY2015) water use (gallons/occupant) **1.43 kGal/student**

Percentage reduction in domestic water use **23 percent**

Percentage reduction in irrigation water use **N/A**

Time period measured **(07/2004 – 06/2015)**

How did you document this reduction (e.g., ENERGY STAR Portfolio Manager, utility bills, school district reports)?

Using Utility database records

Describe the practices your school employs to increase water efficiency and reduce the amount of potable water used for irrigation.

During the month of September 2013, students, staff, community members, and local businesses collaborated to establish an Enviroscape Garden, in our school's courtyard. The type of vegetation in this garden decreases the rate of erosion caused by rainfall and flooding. Our Rainscape Garden is maintained by our students, on an ongoing basis.

During the 2013-2014 school year, students created signs and affixed to walls above water fountains and inside of restrooms. These postings encouraged and reminded students to conserve water, by preventing the water to flow unnecessarily.

Staff and students report leaky faucets to minimize water waste and allow the maintenance staff to make expedient repairs. Building Service Staff monitor the cooling tower for any leaks during the cooling season.

Describe how your school uses water-efficient native plants in landscaping.

In September 2013, students, staff, community members, and local businesses planted perennial plants that are native to the state of Maryland, in an effort to stay true to our local environment and to help students understand the need for native plants as food for our native animals. We established and currently maintain our Rainscape Garden, butterfly garden, and raised vegetable garden.

Our part-time landscaper irrigates the soil to allow water to penetrate through the soil to foster healthy plants. Students, staff, and community members help to maintain the shrubs, flowers and plants around the perimeter of our school grounds. We continue to maintain the gardens during the 2014-2016 school year.

This year we are working the Department of Environmental Protection on ways to involve students in a storm water mitigation project (storm that they are doing on the school site).

Describe any efforts to reduce stormwater runoff and/or reduce impermeable surfaces.

N/A

Describe the source of your school's drinking water and what measures are in place to protect it from potential contaminants and lead.

The source of drinking water at Sligo MS is municipal. In 2004, MCPS implemented a comprehensive testing program to detect elevated levels of lead in drinking water at schools. At that time, a remediation plan was instituted for those facilities where elevated lead levels were found. Currently, MCPS assesses water quality at locations with potential sources of drinking water not previously included in the program e.g., additions, modernizations, and new construction. Additionally, MCPS continues to institute the Environmental Protection Agency's (EPA) recommendations regarding the routine flushing of all drinking water outlets in order to reduce occupants' exposure to contaminants in drinking water. MCPS has environmental staff that will evaluate water quality at facilities upon request.

What percentage of solid waste is diverted from landfilling or incinerating due to reduction, recycling, and/or composting? Complete all the calculations below to receive points.

➤ **38 Percent**

A - Monthly garbage service in cubic yards (garbage dumpster size(s) x number of collections per month x percentage full when emptied or collected)

MCPS does not use dumpsters to collect garbage from schools. Daily garbage is placed in bags and stored in the schools trash room. The monthly total tonnage of garbage disposed for MCPS is distributed to each school based on number of building occupants (staff & students). Total tons of garbage distributed to Sligo MS for school year 2014-2015 is 33.30 tons

B - Monthly recycling volume in cubic yards (recycling dumpster sizes(s) x number of collections per month x percentage full when emptied or collected)

MCPS requires the recycling hauling contractor to have "On-board Weighing Scale" on the trucks that service all MCPS sites. The weight of each dumpster is weighed before and after service to capture the actual amount of material recycled at each MCPS site.

Total paper/cardboard collected for school year 2014-2015 = 16.89 tons

Total commingle recyclables collected for schools year 2014-2015 = 1.92 tons

One eight yard dumpster for paper/cardboard recycling with two times per week service

One two yard dumpster for commingled recyclables with two times per week service

Similar to the garbage, MCPS does not use dumpsters to collect yard waste recycling. MCPS trucks collect yard waste recycling from designated area at school sites. The monthly total tonnage of yard waste recycling taken to the county transfer station is distributed to each school based on number of building occupants (staff & Students). Total tons of yard waste recycling distributed to Sligo MS for school year 2014-2015 is 1.23 tons

C - Monthly compostable materials volume(s) in cubic yards (food scrap/food soiled paper dumpster size(s) x number of collections per month x percentage full when emptied or collected)

None

$$\text{Recycling Rate} = ((B + C) \div (A + B + C) \times 100)$$

$$((16.89 + 1.92 + 1.23) / (33.30 + 16.89 + 1.92 + 1.23) \times 100) = 38 \%$$

$$\text{Monthly waste generated per person} = (A / \text{number of students and staff})$$

$$(33.30 / 667) = 0.0499 \text{ tons per person per year}$$

SLIGO MS														
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total Tons	
A Trash (tons)	3.22	3.63	2.89	3.02	2.12	2.48	2.88	2.71	3.04	3.15	2.27	1.88	33.30	
B Commingle (tons)	0.19	0.26	0.13	0.16	0.19	0.19	0.13	0.12	0.22	0.12	0.16	0.09	1.92	
B Paper/Cardboard (tons)	1.30	1.38	1.05	0.99	1.15	0.98	0.92	1.29	2.01	4.27	0.73	0.82	16.89	
B Yard Waste (tons)	0.11	0.12	0.13	0.11	0.01	0.07	0.12	0.15	0.05	0.11	0.13	0.12	1.23	
Recycling Rate:	38													

What percentage of your school's total office/classroom paper content is post-consumer material, fiber from forests certified as responsibly managed, and/or chlorine-free?

98 percent of the paper stock purchased by MCPS and Sligo MS is 30 percent post-consumer waste and/or certified by the Forest Sustainability Initiative (FSI). All copier paper distributed by the central warehouse to the schools including Sligo MS carries the FSI label. The largest projects produced centrally for district-wide distribution, such as student assessments, are printed exclusively on 30 percent post-consumer waste paper.

Provide information on the amounts, monitoring, and disposal method for each of the materials below.

Flammable liquids
Corrosive liquids
Toxics
Mercury and/or mercury compounds
Other

Sligo MS is classified as a "general use facility" under Montgomery County regulations. The school's current chemical inventory indicates at least 55 gallons, but less than 220 gallons, aggregate quantity of hazardous chemicals. The school disposes of hazardous chemicals by either submitting a work order to MCPS' Division of Maintenance or contacting the MCPS Science, Technology, Engineering, Art, and Mathematics (STEAM) Supervisor. The chemicals are picked up by a licensed hazardous waste contractor for disposal in accordance with applicable regulations. The school staff is required to properly store and use hazardous chemicals and to notify MCPS' System wide Safety Programs Unit of changes in the school's chemical inventory. The school is also required to maintain a chemical information list and material safety data sheets for all hazardous chemicals onsite. Employees potentially exposed to hazardous chemicals are required to receive appropriate training.

Describe other measures taken to reduce solid waste and eliminate hazardous waste.

Strategic placement of recycling and solid waste collection bins in the interior and exterior of school; signage and visuals above each collection station; collection bins are labeled to clearly identify items that can be recycled and items that cannot be recycled to reduce cross contamination.

System wide reduce, reuse and recycle is promoted and practiced with over 20 types of recyclable materials recycled each year to increase the amount recyclable and to reduce solid waste. Sligo MS is an active partner in recycling the large volume Ricoh toner bottle recycling.

Monthly recycling data and solid waste reduction data is published by the SERT program and distributed to all MCPS schools.

Comprehensive communications inform all principals how to handle potential hazardous waste through a handbook that is updated annually from the chief operating officer of MCPS. Building services staff receive training on response and proper protocols for solid and hazardous waste.

Division of Maintenance (DOM) has contractors available for special hazardous waste pick-up and spill response.

Describe the green cleaning supplies used in your school.

Which green cleaning custodial standard is used?

Sligo MS uses the Division of School Plant Operations' Healthy, High Performance, Green Cleaning Program which incorporates Green Seal GS-39 Criteria for Green Facilities Operations and Maintenance.

What percentage of all products is certified?

75 percent

What specific third party certified green cleaning product standard does your school use?

Green Seal

Describe alternative transportation at your school

What percentage of your students walk, bike, bus, or carpool (2 + student in the car) to/from school? (Note if your school does not use school buses)

How is this data calculated?

Walk = **30 percent**

Bike = **2 percent**

Bus = **50 percent**

Carpool = **18 percent**

Using the approximate number of students who walk, bike, ride the bus, and carpool divided the total number of students.

Which policies and practices has your school implemented?

- Designated carpool parking areas.
- A well-publicized no-idle policy that applies to all vehicles including school buses.
- Vehicle loading/unloading areas at least 25 feet from school building air intakes, doors, and windows.
- Safe Pedestrian Routes to School or Safe Routes to School

School staff members are stationed around the perimeter of the school in order to move traffic along and prevent cars from idling while waiting to pick up their student/s.

All staff are encouraged to participate in Earth Hour, since 2014, when teachers eliminated the use of electricity during the school day for one hour. We plan to participate in the spring of 2016, as well.

Describe activities in your "safe routes" program.

Montgomery County government oversees the safe routes program. The MCPS Department of Transportation (DOT) works with Montgomery County government in order to ensure their recommendations are implemented in the design phases for school renovations and/or construction. The safe routes program operates directly with the school administration in order to design and operate the routes efficiently.

In addition, MCPS and Montgomery County government collaborate, evaluate, and implement safe traffic patterns and solutions at all school. Montgomery County Department of Transportation (MCDOT) has a policy of doing traffic studies at about 30 percent of our schools every year. These are regularly scheduled observations and recommendations on how the traffic situation can be improved at each of MCPS schools. In 2002 and 2010, the MCDOT conducted a comprehensive school zone traffic safety assessment where entrances were adjusted, an island was constructed, a traffic signal was installed with pedestrian response, and another entrance is now an "exit only" driveway for improved safety. The next comprehensive school zone traffic safety assessment will be done in the 2017 – 2018 time frame. During the school year, there are also other observations done at the request of the school, parents, students or the community at large. These non-scheduled observations are done year-around and are usually based on the identification of a hazardous conditions that could have developed as a result of changing traffic patterns.

Describe how your school transportation program is efficient and has reduced its environmental impact.

The MCPS Department of Transportation (DOT) is required by law to rotate its buses out every 12 years. DOT has been renovating about 12% of its fleet every year; as of 2014, 68% of the bus fleet meets or exceeds EPA 2008 Emission mandates.

DOT has a yearly review program of all bus routes. During the review program, every single route is analyzed to identify opportunities to improve efficiency, to avoid having several buses serving the same area. These review processes have allowed DOT to absorb the annual growth in student population while reducing the amount of buses. This result in lower operating cost, reduced environmental impacts, and benefits to the health and well-being of our local and global community.

Describe any other efforts toward reducing environmental impact, focusing on innovative or unique practices and partnerships.

During the 2012-2013 school year, The Tower Companies helped to organize our Green Apple Day of Service, bringing us the following donations:

- Perkins & Will (design and volunteer help)
- Brickman (veggie boxes, fabric, soil, and guidance)
- Gepetto Catering (vegetables for garden from a local farm)
- Finley Asphalt (gravel)
- MCPS Facilities (guidance and approval)

Printers are automatically set to print double-sided copies.

Scrap bins next to printers encourage using both sides of paper before recycling.

Weekly bulletin from the principal is electronic.

All staff are always encouraged to use natural lighting and turn off overhead lights whenever possible.

All staff were encouraged to participate in Earth Hour, 2014 and 2015, when teachers eliminated the use of electricity during the school day for one hour.

We have a prominent display box in the front hallway where the SERT team students and teachers share updates and photos of our Green School efforts.

Teachers use CopyPlus service for large copy needs—a service offered by MCPS to reduce the energy use and wear/tear of copy machines at the school.

School staff circulates shutdown information to school staff and submits SERT Energy shutdown forms on long weekends to reduce energy use and greenhouse gas emissions.

Pillar II: Improve the health and wellness of schools, students and staff

Describe your school's Integrated Pest Management efforts, including IPM/green certifications earned, routine inspections, pest identification, monitoring, record-keeping, etc.

The Integrated Pest Management (IPM) program employs Maryland Department of Agriculture certified pesticide applicators to conduct regular inspections to prevent pest damage. IPM staff identifies and corrects conditions that encourage pests by reducing food, water and shelter for pests, and by eliminating unnecessary pesticide applications. This integrated approach results in the most economical long term solution with the least possible hazard to people, property and the environment. An IPM logbook of all IPM activities is kept in the main office of the school.

What is the volume of your annual pesticide use (gal/student/yr)? Describe efforts to reduce the use of pesticides inside the school and on school grounds.

The Integrated Pest Management (IPM) program uses regular inspections to prevent pest damage. IPM staff identifies, corrects, or generates work orders to correct conditions that encourage pests by determining when to control pests, identify conditions contributing to pest problems through the use of monitoring and thorough inspections conducted at regular intervals. With the assistance of staff, students, and administrators one or more pest control methods including sanitation, structural repair, cultural practices, mechanical control, biological, other non-chemical methods and pesticides will be utilized. This integrated approach results in the most economical long term solution with the least possible hazard to people, property and the environment.

The annual pesticide use at Sligo MS was 0.14 gal/student.

Which of the following practices does your school employ to minimize exposure to hazardous contaminants?

- Prohibit smoking
- Removed elemental mercury and prohibit purchase
- Reduced exposure to carbon monoxide from fuel-burning appliances
- Conducted radon testing
- Removed playground structures containing chromate copper arsenate
- Conducted lead in water sampling

Describe how your school manages and controls student and staff exposure to chemicals (including pesticides) routinely used in the school.

At least 24 hours before any pesticide is applied in a school building or on school grounds, the IPM supervisor will provide written information to the school principal who in turn will provide written notification to each parent/guardian and staff member on the pesticide notification list.

Describe actions your school takes to prevent exposure to asthma triggers in and around the school.

At Sligo MS, school-based staff work with facilities management personnel to reduce asthma triggers by proactively maintaining and servicing the building's Heating, Ventilating and Air-Conditioning (HVAC) systems. Housekeeping activities, building repairs, and renovations, are conducted in a manner to avoid exposing students and staff to fumes, dust, and other irritants. Other asthma prevention measures include: a fully funded and established Indoor Air Quality (IAQ) Department; an efficient indoor air quality investigation process using on-line IAQ complaint forms; an established screening process to review chemicals and building materials; Written 'IAQ in Construction Guidelines' to prevent exposure to asthma triggers; dedicated funding for carpet-to-vinyl floor tile replacement program; and enforcement of No-Smoking and No-Idling Policies on school property.

Describe actions your school takes to control moisture from leaks, condensation, and excess humidity and promptly cleanup mold or removes moldy materials when it is found.

At Sligo MS, staff has implemented a number of mold prevention strategies and response actions including:

- Installing temperature and humidity Wi-Fi monitors;
- Implementing mold prevention training for building service workers;
- Creating a thermostat policy and air compressor maintenance flyer;
- Developing best practices for operating and controlling HVAC systems through an energy management system;
- Alerting staff with e-mail blasts on hot, humid days

Building service staff have been trained on what actions to take to control moisture and promptly cleanup or remove mold. In addition, they have been trained to recognize signs of moisture and generate work orders for maintenance and environmental personnel to evaluate and control moisture sources and visible mold. In the event visible mold is identified, indoor air quality technicians promptly conduct mold remediation activities.

To prevent condensation and excess humidity, classroom thermostats are kept at 76 degrees or higher during the cooling season. Staff members are also instructed to keep windows and doors closed to prevent humid air from entering the building. To minimize the indoor moisture load, carpet shampooing is prohibited during the cooling season. When stripping floors, staff use portable fans and dehumidifiers to facilitate the drying process. Recognizing that water can penetrate the building envelope and cause mold, building service personnel routinely inspect and maintain rooftops and exterior drainage systems.

Describe your school's practices for inspecting and maintaining the building's ventilation system and all unit ventilators to ensure they are clean and operating properly.

In 2010, a building maintenance plan (BMP) was developed for Sligo MS that provides operational and preventive maintenance instructions for school-based staff. This includes inspection of filters, belts, lubrication, overall cleanliness of units, indoor air quality and temperature, record keeping, etc. The onsite building service manager conducts daily inspections, maintains schedules and logs, performs cleaning and monitors operations of ventilation systems.

Describe actions your school takes to ensure that all classrooms and other spaces are adequately ventilated with outside air, consistent with state or local codes, or national ventilation standards.

The outdoor air intake dampers for unit ventilators are open during building occupied modes; closed during unoccupied modes. Dampers are opened to positions correlating to minimum outdoor air requirements via both existing pneumatic controls and newly installed direct digital controls.

Describe other steps your school takes to protect indoor environmental quality, such as implementing EPA IAQ Tools for Schools and/or conducting other periodic, comprehensive inspections of the school facility to identify environmental health and safety issues and take corrective action.

HVAC systems were designed and installed to comply with applicable code requirements, with supply units providing continuous ventilation to occupied rooms. Contaminant control has been improved through the use of higher efficiency air filters. To assist in ensuring acceptable indoor environmental conditions, MCPS has developed HVAC equipment maintenance schedules for school building service staff. The school's plant operations supervisor periodically visits the school to inspect HVAC equipment and check maintenance records.

- Through the implementation of an environmentally preferred purchasing policy, MCPS screens products for use in the school system to ensure safety and health. Using standards established by the Green Seal Organization and Leadership in Energy and Environmental Design (LEED), MCPS reviews product safety literature and makes a determination based on acceptable exposure and environmental limits.
- In 2001, MCPS received EPA's IAQ Tools for Schools Award for their comprehensive and proactive indoor air quality management program. The central focus of this program is the development and implementation of school-specific Building Maintenance Plans (BMP). Similar to an 'Owners' Manual' for the building's HVAC systems, the BMP for Sligo Middle School has been in place and used by school-based staff since 2000.

Describe how your school promotes healthy nutrition among students and staff. Include participation in programs such as the USDA HealthierUS School Challenge, Farm To School, Edible School Yard, or similar programs.

Nutrition education occurs in the classroom, physical education, and through the cafeteria, using the My Plate program and the MCPS health curriculum. Additional fruits and vegetables have been added to the menu, 100% of grains are whole grain, milk is fat-free or 1% low fat, removal of trans-fat and saturated fat is less than 10% of calories, and low sodium. Students are required to select fruit or vegetable with each breakfast and lunch. MCPS also promotes locally grown fruits and vegetables. Apples, melons, celery, green beans, and zucchini are some of the MD agricultural products served. Students learn about where their food comes from, how it's produced and the benefits of a healthy diet. The district has a wellness specialist who works with students to help make the connection between food items, their origin, and their benefit.

Sligo MS has three raised vegetable gardens where sustainability is a focus on the teaching and learning. Student knowledge of nutrition, science, and horticulture is increased by this outdoor authentic learning in edible gardens. Students eat food from the garden: kale, collard green, swiss chard, and cabbage. We host a salad party where students bring various salads to school to share and teach about the nutritional value of each one.

Students are encouraged by their teachers, as they eat breakfast in the classroom, to make healthy food selections from the breakfast tray.

Vending machines are set on a timer to remain off during school hours.

Teachers do not distribute candy to students as a reward.

Teachers only sell for fundraising foods that do not list sugar as the first few ingredients.

Describe the types of outdoor exercise opportunities and nature-based recreation for students. Include how frequently students participate in programs such as Presidential Youth Fitness (FitnessGram), The First Lady's Let's Move, EPA's Sunwise Program, Maryland Children's Outdoor Bill of Rights, etc.

Sligo MS is equipped with outdoor athletics facilities (basketball courts, tennis courts, soccer/baseball fields) to promote unstructured cardiovascular exercise, strength development, agility, self-confidence, and social development. MCPS' middle school curriculum also includes numerous physical education requirements. Students receive instruction related to exercise physiology, biomechanical principles, social psychological principles, and motor learning principles.

Beginning in the fall of 2014 to Fall 2015, over three different running seasons, groups of Sligo MS teachers and parents volunteered their time as running buddies and coaches to Sligo students for the Girls on the Run program, twice each week afterschool. This program taught the girls healthy mind-set strategies, physical activity, and connection to the environment as they prepared for the 5k Fun run in the Fall of 2014, Spring 2015, and Fall 2015. The program culminated with a community service project in which students gathered nonperishable food items that may have been otherwise discarded for Manna Foods. They also donated these foods to a struggling family within the community. Involvement in this program promotes healthy physical fitness, decision-making, and goal setting.

During the fall of 2015, students participated in a school-wide fundraising effort, Fitness Fun Day Challenge, by dancing, playing sports, and exercising.

What percentage (by cost) of food purchased by your school is certified as "environmentally preferable" (e.g., Organic, FairTrade, Food Alliance, Rainforest Alliance, etc.)?

- Not measured at this time.

Does your school use a Coordinated School Health approach or other health-related initiative to address overall school health issues?

Yes, all MCPS schools use a coordinated-school health approach to address school health issues and to improve the health of students and staff. MCPS works closely with the Montgomery County Department of Health and Human Services (DHHS) and the Mental Health Association of Montgomery County (MHA) to develop and implement health-related initiatives. These include incorporating health education into MCPS' curriculum requirements for middle school students. Subject areas, taught by Certified Health Education teachers, include:

- mental and emotional health;
- fitness and nutrition education;
- alcohol, tobacco, and drug education;
- health-enhancing behavior;
- Family life and human sexuality;
- illnesses and disease prevention; and
- safety and injury prevention.

Sligo MS is equipped with a health office, which is staffed by a nurse and a health technician. Health office staff provides guidance and training to school employees, provide health services for students, coordinate school health-related activities with DHHS, and monitor student injuries and illnesses for patterns. The school also has a counseling office that provides assistance and referrals related to mental health and drug intervention.

MCPS has implemented system wide programs designed to assist students experiencing anaphylaxis and sudden cardiac arrest. All schools are provided epinephrine auto-injectors and all staff members receive annual anaphylactic awareness training, with at least three staff members at each school receiving hands-on training in administering epinephrine. All high schools and middle schools are provided automated external defibrillators (AEDs) and all high school and middle school security and athletics staff receive cardiopulmonary resuscitation (CPR) and AED training.

Pillar III: Provide Effective Environmental Education

Describe how environmental and sustainability literacy concepts are integrated within multiple disciplines and grade levels.

The MCPS K-12 Environmental Literacy Plan ensures that environmental and sustainability education occurs as a series of learning progressions from Kindergarten through Grade 12 and involves several content areas. All of the Maryland Environmental Literacy Standards are addressed with a grade-level appropriate content and experiences as students advance in knowledge and skill level. Graduation in the state of Maryland requires that students successfully complete a

high school program that teaches all eight environmental literacy standards. The foundation for these MCPS high school courses is set through the elementary and middle school environmental education curriculum.

In Grade 6, students investigate ecological and sustainability concepts in their project based units on Habitats, Going Green, and Alternative Energy. In the first, students learn foundational ecology while they investigate a local organism and design a habitat that it can survive in. In the second, students create an environmentally friendly design that improves natural resource use in a MCPS facility. In the third, students design and build a solar collector.

Also, in Grade 6, students participate in three days of an Outdoor Environmental Education at a residential site. There they investigate the answer to the question: How do humans impact the environment? The curriculum includes lessons on predator/prey interactions and water quality monitoring. During the past two years, our students have conducted environmental service learning projects to remove invasive plants and collect native seeds for tree restoration programs. From 2014 to present (2015), Grade 6 students have participated in the Trout Unlimited Program, where they raised trout fish and released them to a natural habitat, in an effort to increase the endangered species' population.

In Grade 7, students study hydroponics and its use in modern agriculture. Adaptation and natural selection are big concepts in two of the Grade 7 units. In Grade 8, students gain a better understanding of systems that underlie the interdependence of the living and non-living environment in a unit on earth materials and processes.

With support from GreenKids and Chesapeake Bay Trust, the entire eighth grade conducted water chemistry testing of Sligo Creek in November 2013.

In Grade 6 social studies, students connect environmental factors to where people live and how their cultures evolve. In Grade 7, students conduct research into the effects of modification of the environment in Latin America.

Through a grant from GreenKids and Chesapeake Bay Trust, all of the seventh grade Spanish classes learned about water pollution with a Trash Timeline lesson in Spanish followed by a BMP action project to remove micro-trash from neighboring Sligo Creek and creation of posters to educate our community.

Describe how environmental and sustainability concepts are integrated into classroom-based and/or school-wide assessments.

Mastery of environmental and sustainability concepts are assessed regularly in a variety of ways through formative and summative means, and include, but are not limited to, exit cards, writing to explain, drawing diagrams, oral presentations, etc.

Examples of some specific performance assessments include:

- During the 2013-2015 school year and in December 2015, all Grade 6 students assessed the health of nearby Sligo Creek and compared the results to the water testing done at the Outdoor Education facility. Stream testing, including macro-invertebrate identification, was performed.
- Grade 6 students designed habitat models for the endangered species, the Maryland Checkerspot Butterfly. Students developed recommendations to protect them and increase their population size through research and by creating presentations. These were assessed through a scoring rubric.
- Each year, Grade 6 students research and collaborate in groups to build models of renewable energy sources, such as solar collectors, wind turbines, and hydroelectric convertors. Each has its own scoring tool.
- Each year, Grade 7 students use a variety of hydroponic methods to grow basil.
- Each year, Grade 8 students research Global Warming and build models of homes that include at least three green renewable energy resources. Students use Google Sketch-Up to construct the blue prints that give way to their designs.
- From 2014 to present (2015), Grade 6 students participated in the Trout Unlimited Program, where they raised trout fish and released them to a natural habitat, in an effort to increase the endangered species' population.

- In December 2015, the media center showcased environmental sustainability books and novels in a prominent location in the library, in order to encourage students to read about recommended sustainability practices.

Describe professional development opportunities available in environmental and sustainability standards. Include the number of teachers and administrators who participated in these opportunities over the past 2 years. Also provide the total number of teachers and administrators in the school.

Sligo MS has 53 teachers and 3 administrators.

Eleven Sligo MS teachers have received specific training from MCPS Outdoor Environmental Education staff over the 2012-2013, 2013-2014, and 2014-2015 school years, through workshops and lesson videos.

Sligo MS staff has participated in the following professional learning experiences:

Teacher	Training Attended	Date
All Staff	MAEOE Maryland Green Schools Presentation by GreenKids	January 2014
Science Department	Lesson Modeling by Green Center	2013-2014
All Staff	MAEOE Green Schools Application Updates at staff meetings	2012-2013 2013-2014
Science Department Chair	Growing Garden Teacher Network and DC Green	2012-present
Science Department Chair and a science teacher	Trout in the Classroom professional learning – TIC as a PBL	2014
Mrs. Corvelli & Mr. Gruber	Baltimore Aquarium	2012-2015
6th Grade Team of 11 teachers and... Mrs. Sullivan Mrs. Powell Julie Benner Mrs. Taylor-Rubin Mr. Butler Mr. Gruber	MCPS and Outdoor and Environmental Education Programs	2012-2015
Mrs. Powell	Exploring Wetlands Workshop	2014

Additional meetings:

- 2013 Maryland Green School certification planning and preparation meeting with school staff and SERT program
- 2013 Two school staff members met with SERT program manager and facilitator to discuss opportunities to improve conservation
- 2014 Two school staff members met with SERT facilitator to discuss progress of various conservation efforts at the school and Maryland Green School application

If your school serves grades 9-12, please provide the following information:

➤ **N/A**

Percentage of last year's eligible graduates who completed the AP Environmental Science course during their high school career

Percentage of these students who scored a 3 or higher on the AP Environmental Science exam

Describe how your school uses the environment as a context for exploring and addressing STEM topics that require students to ask questions, develop and use models, plan and carry out investigations, analyze and interpret data, use mathematics and computational thinking, construct explanations, and engage in argument from evidence.

The previous response that addresses environmental and sustainability concepts provides strong evidence of the STEM opportunities that our students are engaged in at Grades 6, 7, and 8, that require them to ask questions, develop models, plan and carry out investigations, design solutions, use math, construct explanations, and create strong arguments from evidence.

At our Science Night in February 2014 and March 2015, students enjoyed the following:

- Hands-on demonstrations on measuring energy use, facilitating the 'Watts' Up lesson plan.
- Learning about reptiles and making use of our EnviroScapes model to teach about pollution in our watershed.

Through the same GreenKids grant from Chesapeake Bay Trust, our Grade 7 students participated in litter removal to protect the Sligo watershed, March 2014.

Students conducted an analysis of the micro-trash we removed from Sligo Creek Watershed in March 2014. A total of 80 lbs. of trash was removed during this project.

In April and May 2015, students participated in walking field trips to Sligo Creek to test the water quality and make recommendations to improve the health of the water for micro and macroinvertebrates.

Describe how your school curriculum makes connections to college and career readiness, and/or provides students with opportunities to learn about careers in fields related to the environment and sustainability.

All MCPS courses for middle schools have the goal of making each student to be college and career ready. Integrated into the curriculum are peeks into careers in the sciences. In addition, community members with professional science careers present information about their jobs at our annual Science (STEM) Night. We ensure representation in the following fields: Environmental Science, Technology, Engineering, and Mathematics.

In February 2014 and 2015, representatives from the Washington Suburban Sanitation Commission (WSSC) presented information about water conservation and career paths in this field of civil engineering.

Describe how students conduct age-appropriate civic/community engagement projects integrating environmental and sustainability topics.

A few years ago, students worked together with the SERT program placed energy-efficient lighting in the computer lab. This allows us to avoid using overhead lights in the computer lab and save a tremendous amount of energy. The students also ensure that the lights are turned off when the classrooms are not occupied. Every morning and every afternoon for the past two years, it has been the job of students to turn on and off the lights for the day.

We have been working on building a strong school green team over the past two years. As a result, an active and strong school SERT team has been established and continues to grow. The school's SERT team inspects all of the recycling bins every Wednesday throughout the school year for proper recycling and compliance.

The school SERT team labeled every bin in our school during 2013-2015.

In February 2014, all Sligo MS students participated in a waste-free lunch education day. Feeding leftover food to worms rather than throwing in the trash was one of the noted highlights. In addition, students discussed how to pack waste-free lunches, played games to test their knowledge about recycling as well as demonstrate what they have learned. Students

discussed how to pack a waste-free lunch. Students play games to test their knowledge of sorting waste and enjoy demonstrating their skills.

During the Earth Week 2014 and 2015, the students designed new light switch labels with energy saving message and placed them switches throughout the school to give a fresh new look.

Students hung posters throughout the school to remind students the importance of conserving energy and caring for our planet.

In Grade 6, students remove invasive species and replant natives or collect native nuts to be used at the state greenhouses to grow new native trees.

Describe students' meaningful outdoor learning experiences that engage students in critical thinking, problem solving, and decision making at every grade level.

Sligo MS has an amazing outdoor classroom that is used often by students and teachers for classes as well as stewardship activities. It includes a pond, vegetable gardens, a butterfly garden, and a RainScapes garden.

Students grow food in gardens at school as they learn concepts such as the interdependency of living things as they discover the pollinators, and the herbivores who come to eat the food, that the predators who eat them.

The seventh grade science classes engaged in litter walks which prompted an honest discussion about the problems of litter in their community and the fact that most litter is caused by people their age.

Students created a Trash Timeline lesson in the schoolyard, followed by a litter cleanup focused specifically on microtrash. Students and teachers alike were shocked at the amount of small trash—including lots of plastic and cigarettes—that littered their schoolyard.

The entire Grade 8 at Sligo MS connected their Grade 6 investigation of watershed to their Grade 8 curriculum with lessons that included the EnviroScapes model.

We conducted a field trip to Sligo Creek for a stream study focused on water chemistry and physical properties of the stream, including buffer zone, temperature, turbidity, pH, nitrates, and dissolved oxygen. Students made brochures about the health of the creek as their reflection piece.

Each school year, Grade 6 students participate in three days of an Outdoor Education residential program each school year where they address the big question: How do humans impact the environment? With that driving question, students study and analyze various habitats as they explore their watershed.

Describe your partnerships with the local community (e.g., academic, business, government, nonprofit and informal science institutions) to help advance your school and the greater community toward excellence in the 3 Pillars. Include both the scope and impact of these partnerships.

At Sligo MS, we are working with many partners including Audubon Naturalist Society (non-profit) on using the outdoors for instruction, Montgomery County Department of Environmental Protection (government) on improving the Sligo MS' footprint through attention to water conservation, the Tower Company (business) to help create an outdoor classroom in our courtyard. Audubon Naturalist Society staff worked directly with our teachers and helped our school achieve Maryland Green School certification.

Brickman and Gepetto Catering, both local businesses, assisted with constructing and planting raised beds so that our students could grow edible gardens while studying ecology and health.

In our partnership with the Montgomery County Department of Environmental Protection-Watershed Management Division and the Brown and Caldwell environmental engineering firm, we are working to improve the quality of water by limiting roadway runoff in our Sligo Creek watershed area. As a school, we have a lot of impervious surfaces such as parking lots, bus loops, and maintenance depots that create a great deal of water runoff and erosion. We are working to create stormwater retrofit projects such as bioretention gardens, bioswales, and tree boxes to collect, conserve, and

redirect water for useful environmental purposes. We are in the planning phases of these projects, doing soil studies and surveying appropriate types and locations of our bioretention options. Our science department is working on ways to incorporate these water conservation and improvement concepts within the MCPS science curriculum. Plans include in-class inquiry projects, as well as, after-school opportunities for our Green Team members.

Describe any other ways that your school integrates core environment, sustainability, STEM, green technology, and civics into curricula to provide effective environmental and sustainability education, highlighting on innovative or unique practices and partnerships.

We are very excited that Sligo MS was recently awarded a \$150,000 STEAM grant to implement a program that focuses on team building and challenges students to look beyond their perceived differences and trust each other, socially, academically, and even physically. The after school components of this program which focuses on the arts, science, engineering, and multi-media communications, provides a laboratory for exploration and cultivate the 21st century skills all students need for academic and social-emotional success in the larger world.

More about STEAM:

The STEAM partners include: the Jim and Carol Trawick Foundation, P4Learning, and Big Learning. Big Learning has offered high-quality after-school programming since 1954. Its mission is to enrich the education of pre-K through middle school students in the fields of STEAM, and World Languages. Class Acts Arts was founded in 1955 and has a mission to bring interactive performances, workshops and residencies into the community to strengthen education, stimulate creative self-expression, and inspire a fresh view of the world. Passion 4 Learning has been in existence since 2004, helping low-income middle school students develop the skills they need for a 21st century knowledge-based global economy. Through literacy-based digital learning, students improve their writing skills and gain new information, communication and technology (ICT) skills and interests.

The STEAM SLIGO partners have established the following objectives for the program:

- Build a team of students who, through the process of inquiry, problem solving, communications, and collaboration, will gain skills and competencies needed for 21st century learning, and design and execute a community learning day.
- The team of students will model and demonstrate community building for their larger school community.

Since January 2015 to the present, a group of 30 Sligo MS students participated in an enrichment, afterschool and summer camp program entitled, Science, Technology, Engineering, Arts, and Mathematics (STEAM). Students researched information and developed projects related to environmental science. The program culminated with a STEAM Day, where students facilitated at various learning stations for community members. Some of the stations provided hands-on experiences such as a recycling obstacle course, water testing at Sligo Creek, building terrariums, and tree leaf classification. Students also composed and performed an environmentally themed song with the recording artist group, Magpie. They also painted a mural of Sligo Creek and the surrounding community, which was installed in the front of the school building.

At Sligo MS, we are proud of our recent progress to create and sustain a green culture among students and staff, and hopeful that our dedication to integrating environmental and sustainability education into the instructional life of the school will produce engaged, informed and active citizens who will make the environment a healthier place to live, study, work, and play. There is always more work to be done!