

1) School Contact Information

School Name	Northwest High School
Street Address	13501 Richter Farm Road
City	Germantown
State	Maryland
Zip	20874
Web Site	www.montgomeryschoolsmd.org/schools/northwesths/
FaceBook Page	
Principal Name	Ms. E. Lancellotti (Lance) Dempsey
Principal Email Address	E.Lancellotti_Dempsey@mcpsmd.org
Phone Number	301-601-4660
Lead Applicant Name (if different)	Ms. Laurie Jenkins
Lead Applicant Email	Laurie_C_Jenkins@mcpsmd.org
Phone Number	301-924-3123

2) School Level

- Early Learning Center
- Elementary (PK-5 or PK-6)
- K-8
- Middle (6-8 or 6-9)
- High**
- Other (please specify)

3) School Type

- Public**
- Private/Independent
- Charter
- Magnet

4) Location

- Urban
- Suburban**
- Rural

5) Student Data

Does your school serve 40% or more students from disadvantaged households? **NO**
Percent receiving FARMS: **27.63%**
Percent Limited English Proficient: **≤5%**
Overall annual student attendance rate: **95.16%**
Public School 6-digit Code: **150246**

6) District Demographics

School District Name: **Montgomery County Public Schools (MCPS)**
Is your school district one of the largest 50 in the nation? **YES**
What is the total student enrollment? **153,852**



2014-2015 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.
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 2014-2015

Charter Title I Magnet Private Independent

Name of Principal: Mrs. Lance Dempsey

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

Official School Name: Northwest High School

(As it should appear on an award)

Official School Name Mailing Address: 13501 Richter Farm Road Germantown, MD 20874

(If address is P.O. Box, also include street address.)

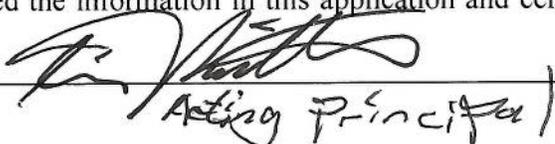
County: Montgomery State School Code Number *: 246

Telephone: 301-601-4660 Fax: 301-601-4662

Web site/URL: <http://www.montgomeryschoolsmd.org/schools/northwesths/> E-mail: Dempsey, E. Lancellotti <E.Lancellotti_Dempsey@mcpsmd.org>

**Private Schools: If the information requested is not applicable, write N/A in the space*

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


Acting Principal

Date: 1/8/15



Nominating Authority's Certifications

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

1. The district 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 education.
2. The district 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: Dr. Lillian M. Lowery

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

A handwritten signature in black ink that reads "Lillian M. Lowery".

Date: January 27, 2015

(Nominating Authority's Signature)

SUMMARY AND DOCUMENTATION OF NOMINEE'S ACHIEVEMENTS

Provide a coherent "snapshot" that describes how your district is representative of your jurisdiction's highest achieving green school efforts. Summarize your strengths and accomplishments in all three Pillars and nine Elements. Then, include documentation and concrete examples for work in every Pillar and Element.

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 green.ribbon.schools@ed.gov according to the instructions in the Nominee Submission Procedure.

OMB Control Number: 1860-0509

Expiration Date: February 28, 2015

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.

7) Summary Narrative (800 words)

Describe your school's efforts to reduce environmental impact and costs, improve student and staff health, and provide effective environmental and sustainability education. Focus on unique and innovative practices and partnerships. A helpful narrative brings to life the facilities, operations, and curricular activities described in the application, and demonstrates how sustainability is integrated into the life of the school. You may want to save this task until after completing the rest of the application.

We are proud to say that Northwest High School (NWHS) is the high school model of sustainability in our school district, and we continue to grow greener every year! Last year, we were certified as a Maryland Green School through the Maryland Association of Environmental and Outdoor Education (MAEOE). With the support of the Maryland Green Centers within Montgomery County Public Schools (MCPS), we provide a holistic, integrated approach to learning that integrates environmental issue investigation and professional development with environmental best management practices and community stewardship. The passion for a healthy and sustainable future is demonstrated throughout the school and engaged in at all levels—from administration, to staff, to students, and the community. These groups, can see, feel, and hear this commitment throughout the halls and in the classrooms through the multiple visual displays, various examples of project-based learning, morning announcements, classroom lessons, student-led videos and artwork, and the infrastructure to support efforts to reduce, reuse, and recycle. Here are just a few examples of the efforts at NWHS to reduce environmental impact and costs, improve student and staff health, and provide environmental and sustainability education.

- In Spring, 2014, NWHS was featured by the MCPS TV in the MCPS-Environmental Sustainability Management Plan with Superintendent Dr. Joshua P. Starr. Mr. Matthew Niper, assistant principal, coordinated Green Day activities and supported green initiatives with the students. He has a passion for sustainability and environmental consciousness at the school and at home.
- NWHS has won more than 12 school awards for School Energy and Recycling Team (SERT)-related measures of environmental impact including digital poster competitions, SERT Spirit awards, and SERT Flash features. These honors are only possible as a result of a school culture of conservation – energy, recycling, and water – within the school community. NWHS staff and students are proud of these accomplishments and celebrate every success. NWHS is the first high school in the system to win a “triple crown” which equates to three annual awards based on conservation efforts and a Superior SERT School award. The award criterion also considers level of activity in the program where NWHS was measured to be the top performing high school in the SERT program.
- NWHS enters the “Lead by Example” campaign annually where students develop an energy conservation project, recycling project, and one sustainability project to submit to SERT for panel review. NWHS has placed consistently in the top three for the past four years—Leading by example.
- Two very active environmental clubs, SERT and Ecology, are responsible for several important environmental improvements at NWHS. The reader is asked to take special note of their contributions below, for these are the student groups who are leading the way for their peers.
- Safety of students and staff is of paramount importance in every school. To that end, the parking situation at NWHS – problematic a few years ago -- received a thorough investigation in order to develop a new plan for the safest parking and pedestrian crossing.
- The developments of healthy habits are cheered at NWHS. Students will have a new course option this year: Personal Fitness Enhancement and Nutritional Analysis – which will include classroom / computer and food preparation instructions on a wide variety of national topics. In addition, all NWHS staff is encouraged to take part in the MCPS Wellness Challenge.
- The formal curriculum includes environmental and sustainability literacy concepts in myriad courses, from biology and government to environmental science, AP Chemistry, and Modern World History. Taking a few of these together ensures that each student masters the eight standards of the Code of Maryland Regulations

(COMAR) in Environmental Literacy - with one of those standards being Sustainability - and graduates environmentally literate!

- NWHS has a very exciting new program for juniors and seniors! They have the opportunity to enroll in and take an Introduction to Engineering course provided by Montgomery College on school grounds. Students who take this course will have the opportunity to graduate from high school with an associate's degree in General Engineering.

These are just a few of the current initiatives at NWHS, a dynamic high school. We are proud of how our staff, students, and community have embraced strong, responsible green behaviors and healthy living. We continue to teach our students to be life-long earth-stewards who value and care for their environment.

8) Q CC1: 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. (Maximum 250 words)

- Actively participating in the MCPS School Energy and Recycling Team Program (SERT)
- MAEOE Green School Certified
- National Wildlife Eco-Schools U.S.A

9) Q CC2: 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)

- 2010 Hee Han, Ameory Luo in the SERT Digital Poster Contest Contest Winners
- 2011 Hee Han, Joseph Rasonabe and Ameorry Luo placed 1st, 2nd and 3rd in the SERT Digital Poster Contest
- 2011 NWHS and the SERT team won the LEAD award
- 2012 Caesar Alvarado placed 1st in the SERT Digital Poster Contest – ENERGY
- 2012 NWHS won the Recycling Spirit Award
- 2012 NWHS and the SERT team won the LEAD award
- 2013 NWHS won Q2 and Q4 SERT Energy Savings awards
- 2013 Gloria Wan placed 1st in the SERT Watt's Up Poster Contest
- 2013 NWHS placed 2nd in Lead by Example Contest.
- 2012-2013 SERT Energy Award Winners for the 4th quarter (June-August)
Superintendent Joshua P. Starr highlighted Northwest High School in a SERT video to recognize the schools efforts. <http://www.montgomeryschoolsmd.org/departments/superintendent/mcpssuper/current/>
- 2014 NWHS placed 2nd in Lead by Example Contest.
- 2014 NWHS won the Superior SERT School award.
- 2014 Winter Got Paper Contest award.
- 2014 NWHS- Savannah McWilliams placed 1st place in SERT Watt's Up Poster Contest.
- 2014 NWHS was recognized as a National Wildlife Eco-Schools USA School.
- 2014 NWHS hosted community paper shred event in November.
- 2014 NWHS created customized communication material to launch and implement the new paperboard food trays.
- NWHS received an energy credit of \$3,000 at the end of last year due to their vigilant efforts to reduce energy consumption.
- The school was recognized in a SERT Flash in 2012 for proactive energy conservation strategies.
- The school received a SERT Flash for an art collage created by students. It is made of all recyclable materials and illustrates the word recycling in 6 languages.
- Participated in the 10th annual America Recycles Day (2013).

10) QIA1: Can your school demonstrate a reduction in Greenhouse Gas emissions?

YES

Percentage reduction: **-17.66%**

Over **(07/02 – 06/14)**

Initial GHG emissions rate (MT eCO₂/person): **1.317**

Final GHG emissions rate (MT eCO₂/person): **1.084**

Offsets: **NONE**

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

11) QIA2: Do you track resource use in EPA ENERGY STAR Portfolio Manager?

YES

If yes, what is your score? **80**

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

If yes, what year? **N/A**

12) QIA3: Has your school reduced its total non-transportation energy use from an initial baseline?

YES

Current energy use (kBTU/student/year): **7,435**

Current energy usage (kBTU/sq. ft./year): **46.11**

Percentage reduction: We experienced a **17.66%** reduction per student and a **21.11%** reduction per square foot

Over time period **(07/02 – 06/14)**

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

13) QIA4: What percentage of your school's energy is obtained from:

On-site renewable energy generation: **NONE**

Type generated

Purchased renewable energy **YES**

Type purchased **Wind energy 32%**

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

14) QIA5: In what year was your school originally constructed?

Year: **1998**

What is the total building area of your school? **340,864 sq ft**

15) QIA6: Has your school constructed or renovated buildings in the past ten years?

YES

Two additions have been completed. The second addition is within the last ten years (2006).

The full addition (65,550 SqFt) was built to meet the intent of green building standards.

Certification was not considered.

For new buildings:

Percentage of building area that meets green building standards: **20% (65,550 sq ft)**

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

For renovated building(s):

Percentage of the building area that meets green building standards:

Certification and year received:

Total renovated area

16) QIB1: Can you demonstrate a reduction in your school's total water consumption from an initial baseline?

YES

Average baseline water use (gallons/occupant): **1.49 kGal/student**

Current water use (gallons/occupant): **1.47 kGal/student**

Percentage reduction in domestic water use: **1%**

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

Time period measured (**07/02 – 06/14**)

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

17) QIB2: Describe the practices your school employs to increase water efficiency and reduce the amount of potable water used for irrigation.

- The school is in the process of investigating the use and purchase of rain barrels to collect non-potable water for landscape irrigation. Rain barrel locations have already been identified and installation is scheduled for spring 2015.
- The school sprinkler systems are set on timers however these are manually turned off when it rains.
- All staff is required to report leaky faucets to minimize water waste and allow services to make expedient repairs.

18) QIB3: Describe how your school uses water-efficient native plants in landscaping.

The school grows native plants from seeds in the school's green house for landscaping.

19) QIB4: Describe any efforts to reduce stormwater runoff and/or reduce impermeable surfaces.

As part of the 2006 addition, the increase in impervious area was limited to only that area required for the building addition and those impervious areas required to support its programs. An existing stormwater management flow control structure was modified to mitigate the environmental impact of the increase in building impervious area by controlling the rate of stormwater discharge from the site back to the pre-addition development rate.

20) QIB5: 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 NWS 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 an environmental staff that will evaluate water quality at facilities upon request.

21) QIC1: 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.

25 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)

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

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)

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

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

22) QIC2: 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?

Over 90% of the paper stock purchased by MCPS is 30% post-consumer waste and/or certified by the Forest Sustainability Initiative (FSI). All copier paper distributed systemwide by the MCPS Department of Materials Management (DMM) carries the FSI label. The largest annually reoccurring projects, such as final exams and exam reviews, are printed exclusively on 30% post-consumer waste paper.

23) QIC3: 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

NWHS 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 the hazardous chemicals by either submitting a work order to MCPS' Division of Maintenance or contacting the MCPS Science, Technology, and Engineering Supervisor. The chemicals are picked up by a licensed hazardous waste contractor for disposal in accordance with applicable regulations. School staff is required to properly store and use hazardous chemicals and to notify MCPS' Systemwide Safety Programs Unit of changes in the school's chemical inventory. NWHS 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.

24) QIC4: 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. Custom created signage and visuals above each collection station to clearly identify items that can be recycled and items that cannot be recycled to reduce cross contamination.

Systemwide recycling and reusing is promoted and practiced with over 20 markets for recycled materials and multiple donation streams reducing our solid waste.

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 has contractors available for special hazardous waste pick up and spill response.

25) QIC5: Describe the green cleaning supplies used in your school.

Which green cleaning custodial standard is used?

NWHSI uses the MCPS-Division of School Plant Operations Healthy (DSPO), 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%**

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

26) QID1: 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?

Bus:	736 (34.81%)
Bike:	5 (.24%)
Carpool:	251 (11.87%)
Walk:	169 (7.99%)

The total student population at NWHS is 2,114. We transport 712 regular education students and 24 special education student. The calculation is done by dividing the difference between 2,114 and the riders by the total student population.

27) QID2: 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, delivery vehicles, pool cars, and MCPS vehicles
- 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

28) QID3: 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 conducting traffic studies at about 20% 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. During the school year, there are also other observations done at the request of the school, parents, students or the community at large. These none-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.

29) QID4: 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, 54% 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.

30) QID5: Describe any other efforts toward reducing environmental impact, focusing on innovative or unique practices and partnerships.

Outstanding collaboration between school administration, staff and students is demonstrated to increase conservation awareness and reduce the environmental impact at the school and the community. Examples include the following:

- NWHS has completed its second annual paper shredding and recycling event and plans to continue its relationship with the Montgomery County Division of Solid Waste Services to encourage community recycling.
- A member of the NWHS Green Team staff actively pursued the transition from Styrofoam to paper lunch trays which has been implemented county wide this year.
- The Class of 2016 adopted a local road to promote recycling and environmental awareness through the Department of Transportation's, Adopt a Road program.
- Administration, staff and students participate in School Energy and Recycling Team (SERT) Recycling Spirit Contest.
- Winner of SERT Recycling Spirit Contest: 2012
- Winner of multiple SERT Lead By Example contest: 2012, 2013, 2014
- Winner of multiple SERT Watt's Up poster contest: 2011, 2012, 2013, 2014
- Winner of Superior SERT Award: 2012, 2014
- Section of main hallway dedicated to the message of conservation with award winning artwork from Northwest High School students.
- Green Team students produced multiple peer-to-peer videos to promote recycling.
- Environmental Science class sends e-mail reminders and make announcements school-wide prior to collecting recyclables.
- Participates in special recycling of material generated from the construction of homecoming floats, decoration, etc.
- The Ecology Club requested a presentation from a local green builder who won builder of the year for their net zero homes. Their presentation focused on a vision to apply renewable resources and energy projection elements to create a new standard for GeoSolar energy efficient home building.
- Participates in the Green Planet Campaign "Bag It" Documentary Screening on Earth Day. Teachers received the documentary DVDs and educational curricula in honor of our County Executive.
- Consistently ensures and submits SERT Energy shutdown forms on long weekends to reduce energy use and greenhouse gas emissions.
- NWHS SERT team submits annual SERT Action Plan outlining initiatives and responsibilities to demonstrate commitment of saving energy and increasing recycling for a sustainable future.
- School has adopted electronic weekly bulletin and electronic staff memos instead of printing hard copies.
- All printing is double-sided when possible.
- Teachers collect major and minor assignments electronically to reduce paper usage.
- Students have space on the school drive to save documents electronically instead of printing.
- Teachers upload review sheets and reference materials to Edline for students to have electronic access to print materials. They have a major student-lead paper reduction plan.
- Teachers routinely use Turnitin.com, an on-line paper reviewing software so students and teachers are not handling/utilizing paper. The grading and reviewing is totally electronic.
- Teachers use CopyPlus—a service offered by MCPS to reduce the energy use and wear of small machines at the school for larger copying needs.
- All computer labs and some classrooms have task lamps to limit the use of overhead lighting whenever possible.
- The Ecology club meets weekly to promote wise energy use and recycling in the school. Reminder stickers have been placed on all light switches to encourage staff to turn lights off when possible.
- The Ecology club writes and announces weekly SERT tips on Jaguar TV.
- The Ecology club has created recycling skits for JAG TV.
- The Ecology club grows herbs and vegetables in the green house that are sold and sometimes gifted to the Northwest community.
- The Ecology Club team members conducted a recycling receptacle inventory of all the classrooms in the school and building and grounds provided the missing bins to ensure complete access.
- Building service team worked with the SERT office to assess lighting levels to reduce the lighting demand in the school thereby providing the school with healthy levels and reducing the use of electricity and equipment.

31) QIIA1: 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.

32) QIIA2: 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 NWHS was **.0009gal/student**.

33) QIIA3: Which of the following practices does your school employ to minimize exposure to hazardous contaminants?

MCPS adheres to a number of policies, procedures, and practices related to minimizing exposure to hazardous contaminants including:

- 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
- Conduct lead water sampling

34) QIIA4: 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 a 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 parent/guardian and staff member.

35) QIIA5: Describe actions your school takes to prevent exposure to asthma triggers in and around the school.

- Built in 1998, NWHS was designed and built with moisture-resistant materials that minimize condensation and the formation of mold, a leading asthma trigger.
- At NWHS, MCPS reduces asthma triggers through the following ways: an IPM program; a fully funded and established Indoor Air Quality 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.

36) QIIA6: 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.

- With regard to moisture prevention, NWHS is designed, operated and maintained to control moisture from leaks, condensation and humidity. Depending on ambient conditions, wireless data loggers may be used to remotely monitor temperature and humidity. These portable devices allow trained staff to proactively address conditions which could lead to condensation and mold. Building services personnel routinely check for water leaks, visible mold and any conditions that could lead to excessive humidity. Where appropriate, portable dehumidification units are temporarily deployed to reduce excessive humidity.
- MCPS follows Environmental Protection Agency (EPA) guidelines in removing mold and moldy materials arising from various sources of moisture. When indoor visible mold is discovered, professionally-trained personnel use the appropriate personal protective equipment and containment methods to remove the mold in a safe manner. After the mold has been removed, the source of the moisture is eliminated.

37) QIIA7: 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.

Formal building inspections, including inspection of ventilation systems are performed biannually by off-site building service supervisors. 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 proper operation of the ventilation systems.

The onsite building service staffs routinely replace air filters for all heating, ventilation, and air conditioning (HVAC) systems on a quarterly basis and clean unit ventilators and submit work orders to ensure their proper operation. When indoor air quality issues arise, trained professionals from the MCPS Indoor Air Quality (IAQ) Team respond, coordinate or provide the necessary corrective actions.

38) QIIA8: 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. The air-handling units serving the building utilize a demand based ventilation sequence to ensure all occupied spaces receive the appropriate ventilation air.

39) QIIA9: 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 set forth 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.
- The IAQ Team, an EPA-Tools for Schools Award Winning Program, responds to on-line IAQ complaint forms in a quick, efficient manner. At NWHS, the IAQ Team has implemented a number of improvement actions including the replacement of carpet with floor tile (for several rooms) and the comprehensive cleaning of building air intakes.

40) QIIB1: 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.

NWHS is a United States Department of Agriculture (USDA) Team Nutrition School. Nutrition education is done 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 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.

- Vending machines are on timers to prevent students from snacking between meal times.
- Pizza sales portions are limited and the school no longer holds sales of sugary foods.
- All staff members are encouraged to participate in the MCPS Wellness Challenges and NWHS has received awards in the amount of \$2500.
- Some student projects that have been presented at the school Ulysses Fair, which all students attend, include topics such as gluten and Celiac's disease, comfort food, the effect of exercise on mood, eating disorders and world hunger.
- Family Life and Human Sexuality.
- Personal Fitness Enhancement and Nutritional Analysis – a new course going beyond the surface to examine your own personal fitness levels and ways of improving and enhancing the components of fitness – classroom/computer and food preparation instruction on a wide variety of national topics.
- First Aid/Cardiopulmonary Resuscitation (CPR) /Automated External Defibrillators (AEDs).
- NWHS offers First Aid, Personal Fitness class and Family Life.

41) QIIB2: 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.

NWHS is equipped with outdoor athletic facilities (tennis courts, ball fields, basketball courts) to support curriculum-based and unstructured athletics and exercise. MCPS' high school curriculum also includes numerous physical education requirements. Students receive instruction related to exercise physiology, biomechanical principles, social psychological principles, and motor learning principles. Students record their physical activity in personal journals and demonstrate their ability to adhere to personalized physical fitness routines.

The school has piloted a horticulture class for the 2014-2015 school year where students have tested local soil samples to look for nutrient deficiencies, are growing local plants and vegetables and are examining environmental impacts on plant growth.

The school promotes nature-based recreation using a courtyard garden and a greenhouse. The school also supports an ecology club, where students grow and distribute plants.

- The school's courtyard has been landscaped to encourage use by students for lunch and to encourage an appreciation for the green outdoors. This has proven to be successful.
- A memorial garden is maintained in memory of staff who have deceased.
- Grade 9 Environmental Science students are planning on taking an outdoor field trip to Harper's Ferry for water testing.
- We use parts of fitnessgram in our PE classes
- High school physical education is a 1 credit graduation requirement, and at least 50% takes place outdoors. Some students take more as an elective. Some classes may be mostly outdoors (Specialty Soccer) and some may be all indoors (Specialty Basketball).

42) QIIB3: 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.

43) QIIB4: Does your school use a Coordinated School Health approach or other health-related initiative to address overall school health issues?

YES

Briefly describe the health-related initiatives
Does your school partner with any postsecondary institutions, businesses, nonprofit organizations, or community groups to support student health and/or safety? Yes or No
If yes, describe the partnerships.
List and/or describe any efforts to support student mental health and school climate (anti-bullying, peer counseling, etc.)

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 high 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.

NWHS 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 systemwide 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 are provided AEDs and all high school security and athletics staff CPR and AED training.

To address sports-related health issues, MCPS requires all high school student athletes to receive physical evaluations prior to participating in interscholastic athletics and to receive health and safety training related to concussions, heat stress and dehydration, Methicillin-resistant Staphylococcus Aureus (MRSA), and performance-enhancing drugs. Additionally, MCPS requires all high school student athletes to undergo baseline concussion testing every two years, with free follow-up testing available for students who sustain concussions.

44) QIIIA1: 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 Curriculum standards are addressed at a grade-appropriate level 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 education standards. The foundation for these MCPS high school courses is set through the elementary and middle school environmental education curriculum.

All high school students take Biology and National, State, and Local Government (NSL); together, these two classes provide instruction in all eight environmental education standards. While Biology teaches to seven of the eight EL standards, standard 1 - issue investigation and action - is addressed in social studies. In both National, State, and Local Government and in Modern World History, students learn about issues related to sustainability and citizen responsibility towards the environment. In NSL Government, usually taken in Grade 10, students learn about political participation and the role of citizens in advocating for important issues or concerns. As a culminating task, students research an issue of environmental concern and then draft advocacy letters to federal or state officials suggesting legislation or other actions needed to address the concern. Issues of sustainability and Smart Growth are further explored in Unit 7 within the context of understanding public policy and the government's role in protecting the environment through regulation and other public policy decisions. In Modern World History, usually taken in Grade 11, students investigate economic, social, and environmental impacts of globalization. They analyze current trends in sustainability and resource consumption in order to make predictions about long term consequences to human-geographic interactions.

In addition to required courses, students also may enroll in several Advanced Placement courses that address the environmental literacy standards, including AP Environmental Science. AP Human Geography is increasing in popularity and students taking the course are achieving at high levels.

Authentic environmental issue investigation and action helps students develop critical and creative thinking skills that will prepare them for their future in the 21st century. Specific examples include:

- Environmental Chemistry students have a unit where they learn about the planet's resources, our use of these, and the importance and proper implementation of recycling. They create recycling awareness posters to inform the student population.
- Environmental Chemistry students do a case study on plastics. The focal point is the video: Bag It, which focuses on plastic bags. The students learn that petroleum, a nonrenewable resource, is the main ingredient in plastic bags, they learn about how plastics have been proven to have negative health effects and the major environmental impact of plastic waste. The students write letters to either plastic manufacturers, shop keepers, senators or the President to lobby for the reduction of plastic manufacturing, use and proper disposal.
- Signature Honors Chemistry watched the Bag It video and wrote action letters based on the environmental and health impacts of plastic. They also made a poster as a visual support to this letter.
- In US History, 9th grade students examine Al Gore's documentary on global warming and then counters to this. Students argue their viewpoints.
- AP Environmental Science students build model solar houses during the energy unit.
- Grade 9 Environmental Science students collect recyclables throughout the school weekly and write reflections of their experience. The entire school participates in this effort as all classes put out their recycling containers for easy access as the students sweep the school.
- Students that went on the Recycling Center field trip wrote a reflection afterwards.
- Students that participated in Earth Day wrote a reflection afterwards.
- In Signature Honors Biology, students read about 4 controversial genetic issues (genetically modified foods, cloning, stem cells and genetic testing). They selected one of these issues and wrote an essay about the science, the pros and cons, the implications for society and suggested actions steps for the future.
- AP Environmental Science classes did a solar cooker project in which they designed and created solar cookers and cooked S'Mores on them.

- AP Environmental Science classes did a pollution project in which students examined pollutants and their effects on the environment and public health. They then created a "Wanted" poster for their given pollutant highlighting its common name, where it can be found, its harmful effects and our current methods of defense against these.
- In AP Environmental Science the students write a Current Event essay where they discuss environmental and sustainability topics. They first examine relevant news articles and videos with a focus on environmental, legislative and economic education.
- NWHS has a highly selective and rigorous program known as the Ulysses Program. The focus is on research skills and inquiry learning. The students complete research projects throughout their 4 years and must complete a senior research thesis. Students present their projects to the entire school at the Ulysses Fair. Some notable topics the students have chosen to focus on include effects of air pollution on children, global warming, green buildings, the health of coral reefs, the importance of sharks in our ecosystem, and the readiness of society to switching to alternative fuels.
- Students taking French at a variety of levels have whole units devoted to improving the environment. For example, students follow instructions in French that have them reduce and paste several activities onto one sheet of paper and print this out on the back side of paper that has already been used for another purpose.

45) QIIIA2: 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 assessments include:

- In an Environmental Chemistry lesson, the students learn how to purify a sample of foul water within the laboratory and compare the laboratory methods to industrial methods of water purification. The students then reflect on the great effort and large amount of energy required to generate their clean water.
- The Environmental Chemistry students conduct a study of their personal water consumption and describe efforts to reduce water waste in their home and at school.
- The students in the Biotechnology Program study the effects of environmental conditions that cause cell mutations.
- Environmental Science 9 focuses on hands on projects and labs that promote environmental consciousness. The projects are assessed using a scoring tool.
- In NSL government, students study and environmental issue of their choosing and write an advocacy letter that is assessed with a scoring rubric.

NWHS also participates in a systemwide conservation campaign where Baldrige Action Plans are utilized to develop a minimum of three projects with measurable results. These three projects revolve around energy conservation, responsible recycling, and sustainability while focusing on in-school opportunities, at home projects, and community-based initiatives.

46) QIIIA3: 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.

- The school has 5 administrators and 223 staff members.
- 60 staff members participated in professional development given by the SERT program in February 2014. The training was called SERT Leader Success Training to learn about energy conservation, responsible recycling, and environmental stewardship. Curriculum connections are shared and student investigational-based projects are reviewed.

- All NWHS staff are encouraged to participate in SERT shutdowns during which all nonessential electronic equipment is turned off and the blinds are lowered to prevent building temperature variation. Over the last 2 years, staff has embraced energy conservation. (100% participation)
- A staff member attended a SERT Leader Success Training to learn about energy conservation, responsible recycling, and environmental stewardship. Curriculum connections are shared and student investigational-based projects are reviewed.
- A staff member attended a NEED (National Energy Education Development) workshop to learn facts about the different types of energy sources. Curriculum materials were obtained and used in Environmental Chemistry in the Petroleum unit to teach students about Hydrogen Fuel Cells. A model car demonstrates the use of hydrogen as a fuel.
- A staff member attended a movie give away hosted by an environmentally conscious MCPS parent. County Executive Isaiah Leggett also was present and awarded all county teachers that attended a free copy of the Bag It video along with a curriculum guide. This video has been shown in multiple chemistry classes over the last two school years and the curriculum has been implemented in varying degrees in these classes.
- SERT Program staff presented to school leadership w/professional development, school performance, and existing measures to inspire a culture of sustainability.
- Building service staff are offered and attend SERT trainings where best management practices are reviewed to conserve resources and provide a healthy and comfortable learning environment.
- The school principal shares SERT team contributions and efforts during the weekly recognitions.
- Staff shares SERT team contributions at monthly department meetings.
- Two staff members attended a summer workshop on hydrogen fuel cells and shared what they learned at the science department meeting.
- Two staff members attended a Green School Application workshop.
- Two staff members participated in a stream study investigation led by the Alice Ferguson Foundation.
- SERT Program staff met with the art team to provide development on incorporating resource conservation into their existing classroom projects.
- Several staff members from Northwest High School attended a week long training given by the MCPS STE department focusing on the Next Generation Science Standards and the new biology curriculum pilot that has students examine the impact of invasive species.

47) QIIIA4: If your school serves grades 9-12, please provide the following information:

Percentage of last year's eligible graduates who completed the AP Environmental Science course during their high school career **10%**

Percentage of these students who scored a 3 or higher on the AP Environmental Science exam **50%**

- 10% of last year's eligible graduates completed the AP Environmental Science course.
- 50% of these students scored a 3 or higher on the AP Environmental Science Exam.

48) QIIIB1: 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.

NWHS also has a lead STEM teacher who participated in MSDE Educator Effectiveness Academies (2011, 2012, 2013) and then presented that learning to the NWHS staff.

The Chair of the Science Department has participated in professional learning on project based learning – many of the models for PBL use an environmental context for approaching STEM topics, including the new biology unit on invasive species- and brought that learning back to her department. NWHS courses use the power of environmental issues as context for STEM learning in many courses, including Environmental Science and AP Environmental Science. Other examples include:

- The Career and Technology Department runs a Robotics club at NWHS. Last year they were awarded first place in the Rookies Inspiration Awards category in a National Competition hosted by FIRST Robotics. The skills the students are honing in robotics and engineering will provide students with a background and interest in developing creative environmental engineering solutions in the future.
- Members of the science department staff attended the JETS day (Journeys in Engineering, Technology and Science) at the Universities at Shady Grove and provided middle school students educationally stimulating hands-on activities and demonstrations to encourage interest in science, technology and math.
- Students participate in the national Exploravision scholarship competition where they examine a current technology and predict the changes and implications for the future.
- The Ulysses Program allows students to design, research, and implement their own project and present their work to the student and the community at the biannual Ulysses Fair.

49) QIIIB2: 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.

- NWHS has a new partnership with Montgomery College to offer an Introduction to Engineering class on school grounds; students have the opportunity to graduate from high school with an Associate's Degree in General Engineering.
- The Science Bowl Club prepares students to compete in the Maryland Science Bowl Competition sponsored by the Department of Energy at Montgomery College each year. Students study science topics including biology, chemistry, physics, mathematics, environmental science and energy concepts.
- Northwest Academy of Biotechnology students participate in the annual MCPS young professionals' conference. Students participate in guest speaker presentations on career related topics.
- Unique to NWHS, the Academy of Biotechnology is a perfect match for motivated and highly capable students with an interest in a biomedical career. These students will get opportunities to explore and apply the concepts of molecular biology, genetics and biochemistry in a relevant and rigorous environment. The program begins with honors-level science foundation courses in 9th and 10th grade. In the 11th grade, students take the intensive hands-on cornerstone class, Molecular Biotechnology. This laboratory program utilizes the latest in laboratory equipment and computer technology to investigate the intricacies of microbiology, molecular biology, organic chemistry, and DNA science. Students also explore career pathway options, including environmental health sciences.
- Senior students in the Biotech Academy may intern with local biotech and research labs, including public health and environmental health agencies.
- NWHS juniors and seniors are able to participate in internships during the school day at local businesses (and schools) allowing students to gain experience in potential future careers.

50) QIIIC1: Describe how students conduct age-appropriate civic/community engagement projects integrating environmental and sustainability topics.

- On Tuesday, November 18, 2014, students of the Class of 2016 sponsored the first monthly Adopt A Road cleanup on Dairymaid and Metz Roads. About 25 students from all grade levels participated.
- Ecology Club students wrote and produced an informational video emphasizing the importance of using reusable water bottles instead of simply recycling single use water bottles.
- The Ecology Club has created a northwest water bottle design. They have are selling these to both the students and the surrounding community.
- Art students collaborated on a creative MCPS mural that hangs in a prominent area and encourages students to recycle!
- We do callouts to parents and the community to promote special events like Earth Day and Earth Hour. Students in Environmental science create ads to promote these events
- The school uses social media (website and Twitter) to promote Earth Day and Earth Hour. This method of communication also cuts down on paper notices going home to parents.

- Students coordinated and worked with the County to provide an annual recycling event at the school on a weekend day—providing the community shredding for free!

51) QIIC2: Describe students' meaningful outdoor learning experiences that engage students in critical thinking, problem solving, and decision making at every grade level.

- Students in Environmental Chemistry examined waterways near their homes and brought in a selection of water samples to be tested in a Water-Testing lab.
- At the Green School Awards Ceremony students participated in an educational outdoor activity in which they planted bay grasses.
- Students are in the process of designing a butterfly garden to promote a positive growth environment for local pollinators.
- The biology students are designing a rain garden as a part of their invasive species unit.

52) QIIC3: 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.

- The NWHS SERT team partnered with the Montgomery County Division of Solid Waste Services to have a community recycling day on November 15, 2014. The Northwest and neighboring community was invited to bring electronic equipment for safe disposal and confidential paper for shredding. This is the second event of its kind. In addition, Good Will Industries was present to accept donations of clothing and household goods for redistribution to encourage reuse of household goods. Approximately 600 cars participated during this event.
- NWHSI is involved in the TREX recycling program to collect plastic bags to be recycled.
- Students went on a field trip to the Recycling Center to see how materials were dealt with once they left their homes.
- Two years ago school-wide assembly presentation was conducted by a Leadership in Energy and Environmental Design (LEED) Certified construction company. As a result, members of the Ecology Club visited Nexus Homes in Frederick, Maryland and a follow up club meeting seminar was conducted by students on geothermal and solar technology.
- The Northwest Academy of Biotechnology has a strong partnership with a local biotech company called Emergent BioSolutions. The company sends representatives into the classrooms to discuss their technology and science careers. The company has donated resources to the Biotechnology Program.
- The Environmental Science team is partnering with Alice Ferguson Foundation to expose students to water quality testing.
- Juniors and seniors are taking college courses on school grounds this coming school year. The course is Introduction to Engineering provided by Montgomery College.
- NWHS started a new program with Montgomery College where students have an opportunity to graduate from high school with an Associate's Degree in General Engineering.

53) QIIC4: 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.

- All AP Environmental Science units and assessments address sustainability. All lab activities address a particular environmental topic and then sustainability.
- All AP Environmental Science students use STEM methodology to model their carbon footprint impacts using an online simulation program. The students compile their class data and graphically present what types of land are most impacted by their energy consumption.
- The school has plastic bag collection receptacles placed in key locations to encourage proper recycling.
- The school sponsors a prom dress donation every year in which unwanted prom dresses are donated to students to use in order to prevent wasteful purchasing and disposal.
- Students recycle weekly as part of the Environmental Science class. They write reflection on what they see, think and feel based on what they see in the bins. Students also earn SSL for their feedback and promotion of recycling campaigns.

- Students participated in a schoolwide contest writing scripts to promote recycling and the winning script was video-taped and aired on our JAG-TV network.
- Students designed energy conservation T-Shirts to promote recycling
- The Class of 2016 is looking to Adopt a Local Road to promote recycling and environmental awareness.
- Recycling bins have been purchased to support recycling after school hours on the school property (outside fields) and to encourage recycling within the community.
- The school purchased aluminum barriers and recycling advertising was developed to place on the barriers for athletic events in the NWHS stadium. This encourages and reminds parents, students, and visitors to recycle.
- The school staff removed all old heat producing devices and chose devices with green technology and energy star certified when replacement was needed.
- Offices are outfitted with task lamps to reduce energy use.
- The school sends out weekly SERT Tips to staff to promote awareness and recycling
- Building services shuts down lights in hallways after school hours to conserve energy
- Students created a Rap Video to promote recycling at the school.
- You Tube videos are used on Jag TV to promote green initiatives at the school
- The school advertises recycling and energy conservation on bulletin boards throughout the school.
- Posters developed in our arts program are reproduced and distributed to all 201 schools to create awareness of our responsibility to protect our environment (Winning Watt's Up posters)
Posters can be found on website: www.greenschoolsfocus.org
- Students in Social Students focus on the civic implications of environmental literacy. Students watch two environmental films: An Inconvenient Truth and Global Warming & Acid Rain. After watching both films and conducting independent research, students form their own informed opinions about climate change. Students also create an entire presentation about climate change throughout the history of the United States which includes the environment and our policies.

We hope that our comprehensive efforts to reduce environmental impacts and 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, work, and play.