U.S. DEPARTMENT OF EDUCATION

GreenRibbonSchools

2012-2013 Nominee Presentation Form

PART I - ELIGIBILITY CERTIFICATION

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. *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 one or more of grades K-12. (Schools on the same campus with one principal, even a K-12 school, must apply as an entire school.)

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 and sustainability 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.

For Public Schools only: [ ] Charter [ ] Title I [ ] Magnet [ ] Choice

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

Official School Name Magna Vista High School
(As it should appear in the official records)

School
Mailing Address 701 Magna Vista School Road
(If address is P.O. Box, also include street address.)

Ridgeway	Virginia	24148
City	State	Zip

County Henry County Public Schools State School Code Number* 20

Telephone (276) 956-3147 Fax (276) 956-1401

Web site/URL http://web.henry.k12.va.us/magnavista/ E-mail gagnew@henry.k12.va.us

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

Gracie R. Agnew Date January 31, 2013
(Principal's Signature)

Name of Superintendent* Dr. Jared Cotton
(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

District Name*Henry County Public Schools Tel.(276) 634-4711

I have reviewed the information in this application and certify that to the best of my knowledge all information is accurate. This is one of the highest performing green schools in my jurisdiction.

Date January 31, 2013
(Superintendent's Signature)

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

PART II – SUMMARY OF ACHIEVEMENTS

Magna Vista High School believes all students and staff must be good stewards of the environment and the school division's financial resources. Magna Vista High School (MVHS) embraces energy conservation and recognizes that minimizing energy consumption and related costs will maximize funds available for use in the classroom.

Magna Vista High School has a comprehensive approach and demonstrated progress towards each of the Green Ribbon School award program goals:
Goal I: Reduce environmental impact and costs.
Goal II: Improve the health and wellness of students and staff.
Goal III: Provide effective environmental and sustainability education, incorporating STEM, civic skills, and green career pathways.

Quantifiable measures for each goal are included within this application.

Goal I: An established energy conservation program with short- and long-range strategies to reduce energy consumption has been in place since 2009. Accurate records of energy consumption and cost have been maintained and shared with the community on a monthly and annual basis. From 2009 to 2012 Magna Vista High School's cost avoided savings totaled $248,426 which equates to a savings of 25%.
Magna Vista High School also underwent major renovations in 2012 which included upgrading lighting and a HVAC system. This resulted in Magna Vista High School receiving an Energy Star rating and a 20% reduction in electric consumption.

Goal II: In addition to facility improvements and significant savings in the past three years, Magna Vista High School also recognizes healthy behaviors of students and staff are vital to the success of the school's instructional program. Magna Vista High School has high standards for nutrition and fitness in order to improve student and staff health, attendance, and achievement.

Goal III: Environmental and sustainability education are an anchor in Magna Vista High School's curriculum. In addition to career and technical courses focused on green career pathways and STEM, all students must take Earth Science and Biology which are embedded with environmental and sustainability standards. Magna Vista High School also has nationally recognized horticulture and agriculture programs which have waiting lists each semester and twenty percent of students in grades at MVHS are enrolled in at least one horticulture or agriculture course each semester.
Magna Vista High School prepares students, not only for post-secondary education and careers, but to be responsible stewards of their environment. The school focuses on environmental education, green career pathways, and STEM opportunities.

From 2009 to 2012 Magna Vista High School's cost avoided savings totaled $248,426 which equates to a savings of 25%.

PART III – DOCUMENTATION OF STATE EVALUATION OF DISTRICT NOMINEE

Instructions to Nominating Authority

The Nominating Authority must document the district's high achievement in each of the three ED-GRS Pillars and nine Elements. Please attach documentation in each Pillar and Element. This may be the Authority's application based on the Framework and sample application or a committee's written evaluation of a school in each Pillar and Element.

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 and sustainability 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: Virginia Department of Education

Name of Nominating Authority: Dr. Patricia I. Wright, Superintendent of Public Instruction

(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 district meets the provisions above.

Patricia I. Wright Date 2-6-13

(Nominating Authority's Signature)

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.

VIRGINIA GREEN RIBBON SCHOOLS
APPLICATION COVER SHEET
2012-2013

School Name: Magna Vista High School	**School Mailing Address:** 701 Magna Vista High School Road Ridgeway, Virginia 24148

Contact Person for the Green Ribbon Schools Application

Name: Mrs. Melany Stowe **Position:** Coordinator for Parent and Community Outreach

Contact's Mailing Address: PO Box 8958 Collinsville, Virginia 24078

Telephone: 276-634-4766 **Fax:** 276-638-8990 **E-mail Address:** mstowe@henry.k12.va.us

Principal's or Headmaster's Name: Mrs. Gracie Agnew	**Telephone:** 276-956-3147
Signature of Principal or Headmaster: Gracie Agnew	**E-mail:** gagnew@henry.k12.va.us
Superintendent's or Private School Board Chief Officer's Name: Dr. Jared Cotton	**Telephone:** 276-634-4711

I certify that all information presented in this application is accurate and truthful; that the applicant school is eligible and fully compliant with applicable civil rights, health, safety, and environmental statutory and regulatory requirements; and that I approve and support the submission of this application.

Signature of Superintendent or Private School Board Chief Officer:

Date: December 6, 2012

Please provide a brief description of the applicant school, including school population demographics; the community the school serves; whether it is urban, suburban, or rural; and other useful "snapshot" information. (125 words max)

Magna Vista High School is a rural school located in Southwest Virginia. The school serves 910 students in grades nine through twelve. The majority of students are Caucasian 59%, 34% African-American, 4% Hispanic, and 3% mixed-raced. Fifty-seven percent of students are eligible to receive free or reduced lunch. Magna Vista is one of two high schools in Henry County.

Henry County is in the midst of a catastrophic economic shift with the recent closing of several major employers and their related manufacturing plants. Magna Vista High School has served as a beacon in the community, state, and nation by continuously focusing on the needs of all students and ensuring that all students are prepared for their future, not our past.

TABLE OF CONTENTS TEMPLATE

SCHOOL ELIGIBILITY, COMPLIANCE, AND INFORMATION

Name of School Magna Vista High School **School Division** Henry County Public Schools		
Public ☒**Yes** ☐**No**	**Number Students** 910	**Percentage of Disadvantaged Students** 57%
State Accredited in 2012-2013 ☒**Yes** ☐**No** ☐ **N/A**		**Title I/Eligible** ☐**Yes** ☒**No**
In Title I School Improvement 2012-2013 ☐**Yes** ☒**No** ☐ **N/A**		
The applicant school must verify that it is in compliance with applicable civil rights, health, safety, and environmental statutory and regulatory requirements.		
☒**Yes** ☐**No**	The nominated school or its division is not refusing United States Department of Education Office of Civil Rights **(**USED/OCR) access to information necessary to investigate a civil rights complaint or to conduct a divisionwide compliance review.	
☒**Yes** ☐**No**	USED/OCR has not issued a violation letter of findings to the school/division concluding that the nominated school or the division as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if USED/OCR has accepted a corrective action plan from the school/division to remedy the violation.	
☒**Yes** ☐**No**	The United States Department of Justice does not have a pending suit alleging that the nominated school or the school division as a whole has violated one or more of the civil rights statutes or the Constitution's equal protection clause.	
☒**Yes** ☐**No**	There are no findings of violations of Individuals with Disabilities Education Act (IDEA) in a USED monitoring report that apply to the school or school division in question; or if there are such findings, the state or division has corrected, or agreed to correct, the findings.	
☒**Yes** ☐**No**	The school has no outstanding citations for violation of Federal environmental regulations and standards (including, but not limited to: Clean Air Act; Clean Water Act; Safe Drinking Water Act; Solid Waste Disposal/Resource Conservation and Recovery Act; Oil Pollution Act; Superfund/Comprehensive Environmental Response Compensation and Liability Act; Federal Insecticide, Fungicide, and Rodenticide Act; and Toxic Substances Control Act), nor has it resolved another noncompliance case within one year of concluding successful performance of all requirements of a settlement.	
☒**Yes** ☐**No**	The school has no outstanding citations for violation of Federal, state or local occupational safety and health regulations and standards, nor has resolved such a case within the past year.	
☒**Yes** ☐**No**	The school has no outstanding citations for violation of federal food and drug standards, nor has resolved such a case within the past year.	
☒**Yes** ☐**No**	The school has no outstanding citations for state or local environmental, health, existing building, fire, plumbing, mechanical, or property maintenance codes, laws or regulations, nor has resolved such a case within the past year.	

Additional information about school eligibility is available on the USED Green Ribbon Schools Web page at Civil Rights, Health, Environment and Safety Statutory and Regulatory Requirements.

ABSTRACT

Include below a concise summary of how your school is making progress in its efforts to meet the three goals (pillars) of the USED Green Ribbon Schools Program. In the last sentences of this abstract, please provide a summary of any monetary savings that have been realized because of your school's "green" efficiencies. (500 words max)

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CROSSCUTTING QUESTIONS

1. (CcQ1) Is your school participating in a local, state, or national school program that asks you to benchmark progress in some fashion in any or all of the Goals (Pillars)? ☒Yes ☐No
Program(s) and level(s) achieved Henry County Public Schools, including Magna Vista High School, is

currently under contract with Cenergistic, formally Energy Education, for energy conservations, and we have submitted all of our facilities to Energy Star for certification. All of our facilities met the required rating.

2. (CcQ2) Has your school, staff or student body received any awards for facilities, health or environment? ☒Yes ☐No Energy Excellence Award for Energy Savings (2011), Energy Excellence Award for Environmental Savings (2012), Virginia School Board Association Green Schools Challenge with Second Place Platinum Certification overall in the State (2012)

GOAL AREA 1: Reduce Environmental Impact and Costs

Element 1A: Reduced or Eliminated Greenhouse Gas (GHG) Emissions

3. (1A1) Can your school demonstrate a reduction in greenhouse gas emissions?

☒Yes ☐No Percentage Reduction 41% Time period: from 2009 to 2012

Initial GHG emissions rate (MT eCO2/person) 5.9

Final GHG emissions rate (MT eCO2/person) 2.4

Offsets: If your school offsets GHG emissions from building energy use, please explain any offsets used. n/a

How did you calculate the reduction? Energy usage is tracked by the technology, EnergyCap software. This software received the Energy Star Partner of the Year Award in 2012. A report is generated monthly and distributed to all stakeholders. The report details cost savings, energy costs, energy usage, cumulative greenhouse reduction, and cumulative energy savings.

4. (1A2) Has your school received EPA ENERGY STAR certification or does it meet the requirements for ENERGY STAR certification? ☒Yes ☐No

Year(s) (yyyy) 2012 Score(s) received 86

5. (1A3) Has your school reduced its total nontransportation energy use from an initial baseline?

☒Yes ☐No

Current energy usage (kBTU/student/year) 9,397

Current energy usage (kBTU/sq. ft./year) 42.06

Percentage reduction: 24.8% Time period October 2009 to October 2012

How did you document this reduction? EnergyCap software records and automatically performs the calculations. (See answer 3 for additional information regarding EnergyCap.)

6. (1A4) What percentage of your energy consumption is derived from:

On-site energy generation (e.g., solar, wind, waste-to-energy) 0%

Purchased renewable energy 0%

Participation in USDA *Fuel for Schools*, USED *Wind for Schools*, or other federal or state school energy program: ☐Yes ☒No

7. (1A5) In what year was your school originally constructed? 1988

What is the total building area of your school? 203,265 square feet

Percentage of the building area that meets green building certification 100%

School and district officials studied the requirements of achieving "green school" status as stated by the U.S. Green Building Council and The Center for Green Schools. Officials determined Magna Vista High School would meet the criteria easily and had an exemplary record of achievements (national and state).
Magna Vista High School meets the following criteria:

- Conserves energy and natural resources which is proven by the energy performance of the school;
- Saves taxpayer money, by reducing energy consumption;
- Improves indoor air quality by measuring CO2 in critical areas;
- Removes toxic materials from places where students learn and play;
- Employs daylighting strategies and improves classroom acoustics where applicable;
- Employs sustainable purchasing and green cleaning practices through contracted custodial services;
- Improves environmental literacy in students;
- Decreases the burden on municipal water and wastewater treatment by looking at a near waterless strategy for urinals;
- Encourages waste management efforts to benefit the local community and region;
- Conserves fresh drinking water and helps manage storm water runoff;
- Encourages recycling;
- Promotes habitat protection; and
- Reduces demand on local landfills.

8. (1A6) Has your school added and/or renovated buildings in the past ten years? ☒Yes ☐No

New Construction: Certification ☐Yes ☒No Type (e.g., LEED) _____ Level _____

Total new construction area _____ Percentage that meets green building certification _____%

Renovated Building(s): Certification ☒Yes ☐No Type (e.g., LEED) _____ Level _____

Total renovated area 200,000 square feet Percentage that meets green building certification 100%

9. (1A7) Has your school implemented the Facility Energy Assessment Matrix within EPA's *Guidelines for Energy Management*? ☒Yes ☐No

Does your school have an energy- and water-efficient product purchasing and procurement policy in place? ☐Yes ☒No

Has your school/division made any specific efforts to utilize furnishings, furniture, appliances, and building materials that have minimum production/transportation impact on the environment? ☒Yes ☐No Please describe: (50 words max)

Magna Vista High School works with the County of Henry through Request for Proposal process when bidding any of the above mentioned and all local contractors that have met the criteria are listed and received bid notification. This limits delivery from out of town vendors and contractors.

Please describe any other indicators of the applicant's progress towards elimination of GHG emissions and building impact. Include metrics if available. (50 words max)

In 2009, Magna Vista adopted energy guidelines and an energy policy contract with Cenergistics, formally Energy Education. An energy manager was hired. This continues to be a successful program due to GHG reductions and decreasing utility costs. From 2009 to 2012, MVHS's energy reduction impact is 9,004

MMBTU.

Element 1B: Improved Water Quality, Efficiency, and Conservation

10. (1B1) Can you demonstrate a reduction in your school's total water consumption from an initial baseline?

Average baseline water use (gallons per occupant) 2,230

Current water use (gallons per occupant) 553

Percentage reduction in domestic water use 75%

Percentage reduction in irrigation water use _____ ☒ N/A (If irrigation system not in place.)

Time period measured October 2009 to October 2012

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

Utility bills are recorded by EnergyCAP software on a monthly basis. APPENDIX B

11. (1B2) What percentage of your school's landscaping is considered water-efficient and/or regionally appropriate? 90 % Describe the type and location of plantings.

The school's horticulture and agriculture department maintains the flower beds and landscaping around the building in which they have planted drought tolerant items.

Landscaping beds have been established in raised planters at the entrance of the school. All beds are mulched seasonally to decrease evaporation. Plant selections for the color beds include water-wise perennials such as Lamb's Ear, Ajuga and Salvia. Shrubbery plantings have been established in one bed and include locally adapted plant species including Crape Mrytle, Helleri Holly, Nandina and Blue Rug Juniper. These permanent plantings do not require watering beyond normal rainfall.

Conversion of athletic fields to warm season Bermuda grass was a "Water-Wise" move. Research has shown that clump style Cool Season grasses such as Fescue and Bluegrass require 30.75 gallons/square foot/year whereas Warm Season plants that spread by runners such as Bermuda and Zoysia require 19.50 gallons/square foot/year.

A school arboretum is being developed outside of the greenhouse as part of the horticulture department's landscape curriculum. Plant collection areas are prepared for planting with a layer of commercial grade landscape fabric covered seasonally with mulch to provide weed suppression. Beyond their establishment year, plantings do not require irrigation.

Arboretum demonstration water features include a Biofalls Pond, Disappearing Stream, and a Water Jar Feature with a concealed water reservoir. The Biofalls Pond utilizes a skimmer filter and Bio-Filter Media that support beneficial bacteria for natural water cleansing. The Disappearing Stream demonstrates a water feature providing movement and sound with no standing water. It is also equipped with a Bio-Media Filter system. The Water Jar Feature illustrates the utilization of water in the landscape with zero standing water as its water reservoir is hidden beneath grates. These "green" water features are all operated free of chemicals.

The school greenhouse operates ebb and flood growing tables. This subirrigation approach is a closed system eliminating all greenhouse runoff. The water is recirculated decreasing fertilizer usage. Some commercial estimates have placed fertilizer reductions at 99%. Chemical usage to control foliar disease is virtually

eliminated since this subirrigation approach keeps plant foliage dry.

12. (1B3) Describe any alternate water sources used for irrigation.

Magna Vista High School's greenhouse only uses recycled water for plant irrigation.
Magna Vista High School's agriculture department also uses recycled/reclaimed water for crops and livestock. The school currently uses a well for irrigation for athletic fields and a time-clock system to control the watering times and duration. This system also has a sensor to monitor the weather, therefore if it's raining, the irrigation system will not come on.

13. (1B4) Describe any efforts to reduce stormwater run-off and/or reduce impermeable surfaces.

Behind our livestock facility, they agriculture department drilled fescue to reduce water run-off, and also left stumps in place after grading this area to prevent soil erosion.

14. (1B5) The school's drinking water comes from:

☒Municipal water source ☐Well on school property ☐ Other Briefly describe. _____

Describe how the school's water source is protected from potential contaminants including lead.

The local public service authority performs tests on MVHS's water system annually for any contaminants. They also operate a water treatment plant that is monitored closely and recorded daily.

15. (1B6) Describe how the school grounds are devoted to environmentally and ecologically beneficial uses such as providing habitat for wildlife or preventing erosion.

Magna Vista High School's horticulture department has installed a garden area, in which it provides a home for fish and the water is recycled through pumping stations. The agriculture department has also left brush around the livestock area to provide shelter and bedding for turkey, groundhogs, and deer. The school has partnered with the Dan River Basin Association to grow trout and then release them in the local river (Smith River). The Dan River Basin Association preserves and promotes the natural resources in the Dan River Basin (North Carolina and Virginia).

Element 1C: Reduced Waste Production

16. (1C1) What percentage of your school's total office/classroom paper content is postconsumer material, fiber from forests certified as responsibly managed, and/or chlorine-free? 100%

How was this measured and which, if any standard did you use?

Magna Vista High School currently purchases all paper from BW Wilson paper company. This group is Forest Stewardship Council Certified. The paper is 30% recycled and contains no chemical, wood, or acid. The school's strategic plan/school improvement plan also has outlined to continue reducing paper purchased by utilizing more project-based learning and technology resources.

17. (1C2) What percentage of waste is diverted from the landfill or incinerator due to reduction, composting, and/or recycling? Complete all the calculations below.

A. Monthly garbage service in cubic yards (garbage dumpster size(s) x number of collections per month x percentage full when emptied or collected) 16,000

B. Monthly recycling volume in cubic yards (recycling dumpster sizes(s) x number of collections per month x percentage full when emptied or collected) 600

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) 0

Recycling Rate = (B + C) ÷ (A + B + C) x 100 2,767

Monthly waste generated per person = (A/number of students and staff members) 17.6

18. (1C3) List the types and amounts of hazardous waste generated at your school.

Flammable liquids None	Corrosive liquids None	Toxics None	Mercury None

Other Hazardous Waste: None

How is this measured?

Careful planning and micro-scaling use of laboratory chemicals used in science classes decreases the generation of hazardous waste.

How is hazardous waste disposal tracked?

All middle and high school science teachers Flinn Laboratory Safety teachers have the opportunity to take the Flinn Scientific High School Laboratory Safety Certification Course. This course enables teachers to revisit basic safety practices and learn about new regulations including those pertaining to proper disposal of chemicals and other practices that promote a healthy environment.

19. (1C4) Describe other measures taken to reduce solid waste and eliminate hazardous waste.

Twice a year the county holds a hazardous waste day, in which we will gather all unused hazardous waste, and the county will collect and dispose of at no charge to our school division. There is also a division wide recycling program to eliminate cardboard waste provided by EMI.

20. (1C5) Which, if any, green custodial standard is used by your school?

What percentage of all cleaning products in use is third-party certified-green? 75%

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

All custodial products used in our MVHS are Diversey products, which are certified by independent organizations including Green Seal, Environmental Choice, GreenGuard, EU Flower, and Nordic Swan. MVHS also uses dispensing technology which precisely dilutes concentrated products with tap water to make cleaning safer, more cost effective, and limits the negative impact on the environment.

Element 1D: Use of Alternative Transportation

21. (1D1) What percentage of students travel to/from school by:

Walking/biking 0% Carpooling (3+ students in a car) 4% Riding the school bus 86%

☐ The school does not use school buses. Describe how this information is collected and calculated.

This information is maintained on a daily basis by the pupil transportation department. Due to state regulations for drivers under the age of 18, the majority of students are not permitted by law to have more than one additional student in their car when driving. Therefore, carpooling is only an option for students who are eighteen years old.

22. (1D2) Has your school implemented:

A well-publicized, no-idling policy that applies to all vehicles (including school buses)? ☒Yes ☐No

Designated carpool parking stalls? ☐Yes ☒No

Vehicle loading/unloading areas at least 25 feet from buildings air intakes, doors and windows? ☒Yes ☐No

Safe Routes to School? ☐Yes ☒No If so, describe activities in your Safe Routes program or plan.

As a rural school, there are no residences within a mile of Magna Vista High School. Therefore Magna Vista is not a viable school for the Safe Routes to School Program.

23. (1D3) Describe how your school transportation use is efficient and has reduced its environmental impact.

This policy is communicated in writing and verbally by the Coordinator for Pupil Transportation at the annual meeting for all bus drivers.

24. (1D4) Please describe other accomplishments that have been made in reducing/eliminating negative environmental impact, focusing on innovative or unique practices and partnerships.

Students participating in Piedmont Governor's School for Science and Technology complete extensive, comprehensive research projects annually which tackle a real-world, community issue and provide a solution. These projects are presented and judged by the community.

GOAL AREA 2: Improve the Health and Wellness of Students and Staff

Element 2A: An Integrated School Environmental Health Program

25. (2A1) Does your school have an integrated pest management plan in effect? ☒Yes ☐No

What is the volume of your annual pesticide use (gal/student/year)? 0.005 gal/student/year

Describe efforts to reduce pesticide use and your pesticide-use policies.

Magna Vista High School is currently under contract with a local exterminator company, Economy Exterminators. This company has outlined a pest management plan for MVHS which focuses on non-chemical methods with the goal to keep the school pest-free. The program involves setting up glue boards and monitoring devices in each facility, monthly visits to monitor any potential activity, and provide facilities supervisor reports with recommendations of next step. If a pest problem is detected, then the company utilizes

non-toxic methods first.

26. (2A2) Contaminant Controls

Mercury: Has the school identified and properly removed all sources of elemental mercury and prohibits its purchase and use in the school? ☒Yes ☐No Please explain if "No."

Carbon Monoxide (CO) The school does not have any fuel burning combustion appliances. ☐

If your school has combustion appliances, does your school annually inspect these appliances to ensure no release of carbon monoxide? ☒Yes ☐No By whom? The school district's Facilities Maintenance Department annually performs inspection on this equipment along with running combustion analyzer on each piece of equipment for proper operation.

Are CO alarms installed that meet national fire code requirements? ☒Yes ☐No

Magna Vista High School is currently under contract with a third party environmental testing company which provides constant monitoring if there is any suspicion of contaminants in the school. The Facilities and Maintenance Department monitors CO in the school's boiler room and testing has been performed within compliance guidelines. MVHS annually inspects fuel burning combustion appliances. All potential airborne contaminant areas have exhaust fans which are inspected annually for proper operation.

Radon: Has your school tested all frequently occupied rooms that are at or below ground level for radon gas and has fixed and retested all rooms with levels that tested at or above 4 pCi/L OR your school was built with radon resistant construction features and tested to confirm levels below 4 pCi/L? ☒Yes ☐No

Please explain if "No."

Chromated Copper Arsenate (CCA): Has your school identified any wood playground or other structures that contain chromate copper arsenate and has eliminated student and staff exposure to these materials?

☐Yes ☒No Please explain if "No."

There are no playgrounds on site and all of the landscaping materials used are stone.

Exhausting Airborne Contaminants: Has your school installed local exhaust systems for major airborne contaminant sources as appropriate? ☒Yes ☐No This includes:

Dust collection systems	☒Yes ☐No ☐ N/A		Chemical storage rooms	☒Yes ☐No ☐ N/A	
Fume hoods in science labs	☒Yes ☐No ☐ N/A		Copy/printing facilities	☒Yes ☐No ☐ N/A	

Secondhand Tobacco Smoke: Does your school prohibit smoking on campus and in public school buses?

☒Yes ☐No

27. (2A3) Ventilation

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

Magna Vista High School is currently under contract with two vendors that provide air filtration for all units in the school, and the school district's Facilities and Maintenance Department changes and dates the filters on a quarterly basis. Another vendor is responsible for kitchen hood exhaust cleaning and inspections twice a year.

Magna Vista High School is also completing a renovation project which includes updated exhaust fans for proper ventilation of the building.

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.

Magna Vista High School uses an energy management controls system to operate the air conditioning and heating system which is tied into all exhaust fans in the building. This allows them to occupy the systems before the school day begins and unoccupied at the end of the day provided there are not events. Outside air minimums and CO2 levels in high occupancy areas are also monitored, which in turn will allow more outside air and ventilation when levels reach set point.

28. (2A4) Asthma Control Does your school have an asthma management program in place consistent with or similar to the National Asthma Education and Prevention Program's (NAEPP) *Asthma Friendly Schools Guidelines*? ☒Yes ☐No

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

For students who have known allergies, Magna Vista High School strives to limit a student's contact with the offending allergen. For instance, the school nurse discourages teachers from using scented plug-ins in classrooms for students who have allergies and discourages teachers taking students outside when pollen is at its peak. For students who have problems with perfumes, etc. the school nurse occasionally asks teachers/students to refrain from wearing colognes/perfumes. To minimize food allergies, MVHS does not serve products with tree nuts and peanut butter has been replaced with sun butter. For students with a known allergen to peanuts, classmates are discouraged from bringing items with peanuts to school.

Magna Vista High School is now a "latex-free" school because there are numerous students and staff who are allergic to latex including band-aids, blood pressure cuffs, and stethoscopes. The school nurse has a peak flow monitor that is used for students with asthma which quickly identifies a student's aspiration volume. The school nurse strongly encourages students to keep their inhalers with them at all times instead of in the nurse's office.

Effective in August 2012, MVHS has an adult and pediatric Epi-Pen injector for the emergency management of students with an allergic reaction. It is strongly encouraged for all students who have asthma symptoms related to an allergic reaction to have their own Epi-Pen for field trips and afterschool activities. For students who are having serious asthma issues due to weather, environment, etc., the school nurse assists the students with prescribed nebulizer treatments at school.

29. (2A5) Indoor Air Quality Describe other steps your school takes to protect indoor environmental quality such as implementing EPA's *Indoor Air Quality 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.

Magna Vista High School utilizes an energy management system to insure proper indoor air quality when the building is occupied. The school district's Facility and Maintenance Department performs quarterly inspections of units when changing air filters to ensure coils and air ducts visible are free from dirt and debris.

Magna Vista High School's heating and cooling system was upgraded in 2011 which allows the school to better control outside air intake and better air exchanges by controlling outside air dampers on rooftop units

and controlling exhaust fans. The school's energy management system (EMS) controls the heating and controlling systems and monitors CO2 levels in critical areas to increase outside air intake when needed. Other time units are set at a minimum outside air intake based on the engineers design.

30. (2A6) Moisture Control

Are all structures visually inspected on a regular basis and free of mold, moisture, and water leakage?

☒Yes ☐No Is proper indoor relative humidity maintained below 60%? ☒Yes ☐No

Are moisture resistant materials/protective systems installed (e.g., flooring, tub/shower, backing, and piping)? ☒Yes ☐No

Describe the actions your school takes to control moisture from leaks, condensation, and excess humidity and promptly clean up mold or remove moldy materials when it is found. (50 word max)

The custodial staff at MVHS inspects for leaks in ceilings on a daily basis and reports to the school district's Facilities and Maintenance Department. If a leak is detected, new ceiling tiles are installed immediately. All piping is properly insulated and the energy management system helps with the control of humidity in the building, plus the Energy Manager monitors humidity manually during routine on-site visits.

In addition, MVHS monitors humidity in the school with a set point of 55% at which point the EMS will put the system into dehumidification control when necessary. Magna Vista High School is able to monitor this system remotely. MVHS has a third party environmental testing company under contract for routine monitoring in the school.

31. (2A7) Chemical Management Does your school have a chemical management program in place? Describe how your school controls and manages chemicals routinely used in the school to minimize student and staff exposure.

All middle and high school science teachers Flinn Laboratory Safety teachers have the opportunity to take the Flinn Scientific High School Laboratory Safety Certification Course. This course enables teachers to revisit basic safety practices and learn about new regulations including those pertaining to proper disposal of chemicals and other practices that promote a healthy environment.

Careful planning and micro-scaling use of laboratory chemicals used in science classes decreases the generation of hazardous waste.

Element 2B: Nutrition and Fitness

32. (2B1) Has your school submitted an application for:

a) the USDA's Healthier US School Challenge? ☐Yes ☒No

b) the Governor's Nutrition and Physical Activity Awards Program? ☐Yes ☒No

If "Yes," describe any award level earned, the year(s), and any other pertinent information.

All ten elementary schools received the Bronze level for the 2012 USDA's Healthier School Challenge. An application for Magna Vista High School has been submitted for the 2013 competition. Magna Vista High School meets all of the requirements for the USDA Healthier US School Challenge and the school expects to receive the Silver Award level based on the school's menu and level of student participation.

33. (2B2) Does your school participate in a "Farm to School" program to use local, fresh food?
☐Yes ☒No If "Yes," explain.

Magna Vista High School purchases fresh produce from a local vendor who procures products locally whenever possible. The vendor also ensures that MVHS obtains "Virginia Grown" products for the "Farm to School Week" each year. At the present, MVHS does not have any direct arrangements with local farmers, but the school is listed by the school district on the USDA's Farm to School website for Virginia to let producers know that MVHS is interested in becoming a customer.

34. (2B3) Does your school have an on-site food garden? ☒Yes ☐No
If "Yes," does the garden supply food for school students in the cafeteria, a cooking or garden class, or to the community? ☐Yes ☒No

35. (2B4) What percentage of food purchased by your school is certified as "environmentally preferable?" 0% Please briefly explain the type of foods purchased and how this is done.

The school's nutrition department prefers health-wise menu items for all students. This includes purchasing food that has a "clean label" and is limited on the amount of soy, additives, and preservatives.

Magna Vista High School has not used the specification of certification as "environmentally preferable" in bid specs as of 2012, however, the school's primary vendor food bid is in its final year and this term may have increased in popularity and be more attainable during the next bid cycle in 2013.

36. (2B5) What percentage of students over the past year spent at least 120 minutes of school-supervised physical education per week? 70% Describe how this is measured and monitored.

All ninth and tenth grade students must enroll in and successfully complete a physical education course. Both levels of this course are instructed by highly qualified and licensed teachers.

37. (2B6) What percentage of school-supervised physical education is spent outdoors? 30% Describe how this is measured and monitored.

Students participate in outdoor physical activities that are challenging and health-enhancing and that provide opportunities for social interaction. These are monitored closely by the physical education teacher and students are required to maintain a record of daily participation in physical activities.

38. (2B7) What percentage of your school's current student body has participated in EPA's Sunwise Program or an equivalent program regarding UV protection and skin health? 0%

39. (2B8) Describe the type of outdoor education, exercise, and recreation that is available to your students during and after school.

Magna Vista High School has multiple during and after-school activities that students can participate in including physical education classes, organized sports, a Physical Activities Club, and the JROTC Raider Club. The organized sports that are offered include football, cross country, golf, track and field, baseball, softball, tennis, and soccer. Additional opportunities for recreation and outdoor education are also offered by a community partner, MHC-After 3. This agency provides afterschool and summer opportunities to Magna Vista High School students.

40. (2B9) Are health measures integrated into school assessments and reported to the community?

☒Yes ☐No If "Yes," please describe how this occurs.

Magna Vista High School uses Fitness Gram standards and assessments to measure physical fitness levels in all physical education students and charts their progress. This information is provided to the students and their parents.

41. (2B12) Describe any other practices regarding a) the school's built and natural environment and b) the fitness and nutrition programs that are employed to promote good nutrition, physical activity, and overall student and staff health.

Magna Vista High School supports the MyPlate program and USDA Dietary Guidelines through the food nutrition program. Fitness gram standards and self-assessment are demonstrated by students in all physical activity settings. Students use a variety of resources, including technology, to analyze, assess, and improve physical activity, food nutrition, and personal fitness.

GOAL AREA 3: Provide Effective Environmental and Sustainability Education Incorporating STEM, Civic Skills, and Green Career Pathways

Element 3A: Interdisciplinary Learning about the Key Relationships among Dynamic Environmental, Energy, and Human Systems

42. (3A1) Describe how your school has a specific emphasis on environmental or sustainability literacy.

Henry County Public Schools is known for its solid technology infrastructure. School-wide use of technology such as laptops, iPads and interactive white boards has reduced paper consumption at all schools, including Magna Vista High School. To offset energy consumption of these devices, staff members power them down when not in use. Magna Vista High School utilizes laptop carts and iPad carts with time clocks. When the teacher returns the carts to the designated location, the cart is plugged in and all devices charged for a pre-set time period.

Magna Vista currently has 910 students and 120 staff members. The technology inventory for Magna Vista is as follows:

- 480 iPads
- 724 laptops
- 28 interactive whiteboards
- 35 personal response systems
- 54 iPads

- 50 Nooks
- 5 Kindles
- 8 document cameras

43. (3A2) Describe how environmental and sustainability concepts are integrated throughout the curriculum.

Much of Magna Vista High School's science curriculum addresses environmental literacy. For example, the Earth Science curriculum emphasizes environmental costs and benefits of renewable and nonrenewable resources, effects of human usage on water quality, economic and public policy issues concerning the Chesapeake Bay, and changes to the atmosphere and climate due to human, biologic, and geologic activity. The Biology curriculum includes an entire strand devoted to dynamic equilibria within populations, communities, and ecosystems. In particular, the effects of natural events and human activities on ecosystems is addressed. Environmental Science courses emphasize that human survival depends on developing practices that will achieve sustainable systems.

Environmental and sustainability concepts are also integrated into the JROTC program and the Government/Civics curriculum.

44. (3A3) Describe students' proficiency levels for environmental and sustainability concepts in a) school and division assessments and b) any external measures the school uses.

Students at Magna Vista High School have demonstrated proficient and advanced levels on assessments related to environmental and sustainability concepts. Results from classroom assessments, VA Standards of Learning assessments, and Career and Technical Education certification assessments show that the majority of students at MVHS have a solid understanding of environmental and sustainability concepts.

The VA Standards of Learning assessments provide a means of quantifying student performance on the embedded concepts of renewable resources and sustainability. Students receive assessment scores that are proficient or advanced based on their level of mastery of the embedded concepts.

45. (3A4) Describe whether/how significant teacher professional development opportunities in environmental and sustainability education are provided for all teachers in your school.

Through a Virginia Department of Mines, Minerals and Energy grant, Henry County Public Schools has solar panels installed on a middle school campus for students across the county to use in energy studies. All middle school science and CTE teachers were trained in the National Energy Education Development (NEED) Solar Energy Curriculum in June 2010. Through hands-on instruction with NEED curriculum kits, students have an in-depth experience with solar energy as an alternate energy source. One of the goals of this project is to expand this training and curriculum work with solar panels to Magna Vista and other schools in the district.

In addition, all high school science teachers at MVHS have completed the Flinn Laboratory Safety Certification Course. This course enables teachers to revisit basic safety practices and learn about new regulations including those pertaining to proper disposal of chemicals and other practices that promote a healthy environment.

Element 3B: Use of the environment and sustainability to develop STEM content knowledge and thinking skills to prepare graduates for the 21st century technology-driven economy

46. (3B1) For schools serving grades 9-12

What percentage of your eligible graduates last year completed Advanced Placement Environmental Science? 17 %
What percentage of these students scored 3 or better on the Advanced Placement Environmental Science assessment? 1 %

Magna Vista High School has obtained a grant to significantly increase the number of students taking Advanced Placement courses for the past two years. School officials are pleased with the number of students taking AP courses, however, they do want more students achieving a 3 or better of the end-of-course assessment and are looking into strategies to increase this number.

Does the school use other environmental science-related courses and measures instead (e.g., International Baccalaureate - Environmental Systems, 2- and 4-Year IHE dual enrollment, etc.)? No.

47. (3B2) Describe the time per week on average students spend in classwork that integrates rich environmental content in the STEM disciplines. 72 minutes **Describe whether/how your school uses sustainability and the environment as a context for learning science, technology, engineering, and mathematics skills and concepts.**

Pacing guides devote sixteen percent of instructional time to environmental content in Earth Science and Biology courses. Environmental literacy and sustainability is addressed throughout Environmental Science courses. Career and technical courses include programs such as Project Lead the Way (PLTW) which includes components pertaining to green engineering. In addition, agriculture and horticulture projects include sound environmental practices.

While sustainability and the environment are not currently the focus of the curriculum, this is an area we plan to include in the inquiry/project -based learning that we are moving towards at Magna Vista. This will be one of the major emphases of curriculum development that will take place in the coming years.

48. (3B3) Describe whether/how your school uses sustainability and the environment as a context for learning green technologies and career pathways.

Several Career and Technical Education courses emphasize environmental sustainability. For example, in *Architectural Drawing & Design*, students build a model of a garage via CAD and Revit software and incorporate green technology into their design. Agriculture and horticulture courses also focus on natural resources and environmental systems. In particular, Introduction to *Natural Resources and Ecology Systems* and *Forestry Management* courses enable students to study environmental issues in great depth.

49. (3B4) Describe how your school's environmental and sustainability education program pays particular attention to systematic STEM practices required for an age-appropriate understanding of natural systems.

Curriculum is standards-based and age-appropriate. Environmental science standards spiral, K-12, so that students are working with concepts and developing skills necessary to deepen their understanding of and

appreciation for the environment.

50. (3B5) Do your students engage in Meaningful Watershed Education Experiences (MWEE) or participate in other meaningful outdoor investigations?

Initiated by a MWEE grant several years ago, seventh grade students at Laurel Park Middle School, the feeder school for Magna Vista High School, conduct macroinvertebrate studies of Leatherwood Creek running through the school campus. These studies incorporate analysis of biological health of waters and discussion of the impact of human activity on food chains that ultimately affect trout being raised in schools throughout the district. At Magna Vista High School, these students continue to study water quality through environmental curriculum strands and continuation of Trout in the Classroom (see Item 53).

Element 3C: Development and Application of Civic Knowledge and Skills

51. (3C1) Describe how outdoor learning is used to teach an array of subjects in contexts, engage the broader community, and develop civic skills.

The horticulture and agriculture teachers have developed outdoor learning facilities which enable students to practice real-world environmental sustainability skills through projects. For example, outdoor gardens and animal corrals are maintained by students.

Other teachers and their students have access to these facilities and there are plans to integrate courses for more inclusive utilization of them in the future.

52. (3C2) Describe whether/how all students are encouraged or required to conduct class or individual, age-appropriate, civic/community engagement projects focused on environmental or sustainability topics. If not in all grades, specify which grade levels and subjects. Describe students' civic/community engagement projects and how they integrate environment and sustainability topics.

Magna Vista High School's strategic plan/school improvement plan includes implementation of a senior project that is focused on service-learning and community involvement. Environmental sustainability issues will be a major component of these projects.

These projects will be required of all seniors and 21st century skills supporting these projects will be embedded throughout the high school curriculum.

53. (3C3) Describe whether/how your school partners with local academic, businesses, government, nonprofits, informal community institutions, museums and/or other schools to help advance your school, other schools (particularly schools with lesser capacity in these areas), and/or the community toward meeting goals consistent with those of the Green Ribbon Schools program.

Magna Vista High School partners with the Dan River Basin Association (DRBA) on *Trout in the Classroom (TIC;* New College Institute on STEM course offerings and onsite work visits for students to provide relevance to the classroom; Patrick Henry Community College on Advanced Placement and Dual Enrollment courses providing STEM and environmental/sustainability curriculum; and the Virginia Museum of Natural History in a variety of ways including educational outreach and field trip programming focused on environmental sustainability.

A new program, *Streamside Trees in the Classroom (STIC)*, began this school year. This program incorporates vegetation as an integral component of trout habitat. Students plant and monitor trees that will be planted alongside local streams and rivers to provide natural buffering. Magna Vista High School has STIC tanks in both the science and Career and Technical departments.

54. (3C4) Describe additional indicators or benchmarks (quantified whenever possible) of progress toward the goal of 100% of your school's students being environmentally literate.

The implementation of senior projects as mentioned in response 52 will ensure all MVHS graduates are environmentally literate.

55. (3C5) 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 innovative or unique practices and partnerships.

Through a partnership with the Dan River Basin Association (DRBA), Magna Vista High School participates in *Trout in the Classroom (TIC).* The science and Career and Technical departments at Magna Vista High School have trout tanks that students monitor as the fish are raised from egg to fingerling stage. Students monitor pH, temperature, and other factors in the tank environment from late fall to early spring followed by a trout release in the Smith River. DRBA personnel provide presentations and macroinvertebrate studies to supplement the program. Throughout the trout study, students discuss impact of human activity on streams, rivers and watersheds in our area.

Streamside Trees in the Classroom (STIC) also integrates sustainability into the curriculum at MVHS.

Several student organizations coordinate recycling efforts for paper products and cell phones. The phones are recycled through the Hope Phones organization. This year the phones are being collected for US troops. In previous years, they were donated to battered women and medical workers in Africa.