



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. Thadine Wright

Official School Name: J. C. Parks Elementary School
(As it should appear on an award)

Official School Name Mailing Address: 3505 Livingston Road
Indian Head, MD 20640

County: Charles State School Code Number *: 080703

Telephone: 301-375-7444 Fax: 301-375-9106

Web site/URL: http://www.edline.net/pages/J_C_Parks_Elementary_School E-mail: twright@ccboe.com

**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.

Date: January 6, 2015



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.

1) School Contact Information

School Name J.C. Parks Elementary School
Street Address 3505 Livingston Road
City Indian Head
State Maryland
Zip 20640
Web Site http://www.edline.net/pages/J__C__Parks_Elementary_School
FaceBook Page
Principal Name Thadine Wright
Principal Email twright@ccboe.com
Phone Number 301-375-7444
Lead Applicant Deanna Wheeler
Lead App. Email dwheeler@ccboe.com
Phone Number 301-375-7444 (w) 301-655-4859 (c)

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?
yes
Percent receiving FARMS **42.5%**
Percent Limited English Proficient **<1%**
Overall annual student attendance rate
98%
Public School 6-digit Code **080703**

6) District Demographics

School District Name **Charles County Public School**
Is your school district one of the largest 50 in the nation? **no**
What is the total student enrollment? **26,463**

7) Summary Narrative (800 words)

J.C. Parks Elementary is a vibrant and environmentally engaged school that strives for 21st century excellence. We are committed to our students, staff, community, and the world around us; we are determined to make our school healthier, safer, and more sustainable.

Sustainability continues to flourish since our Green School designation in 2010. The outdoor classrooms have thrived, the efforts of students to rethink their actions have increased, the use of the outdoors for education across curriculum has grown exponentially, and the idea of "green" has been embedded in daily activities and learning. Green culture has become so prevalent in our school that projects and initiatives are often teacher initiated but student driven. Recently, in a fourth grade class after exploring renewable energy sources with a short video, a student immediately asked how we can harness more of the sun's energy to decrease our reliance of fossil fuels. These types of challenging questions change the way we teach and how the students learn. We, teachers and students, are part of an exciting and important process, one of becoming more aware of our environment and our role to act as stewards, as we grow, explore, and learn together.

How has this culture grown through the past 4 years? The installation of the outdoor classrooms jump-started the change. Because the students played an integral role in installing and maintaining the outside classrooms, they feel that they "own" the outdoor space. We restored much of our school land as we transformed the turf from a barren monoculture of grass into a thriving and largely self-sustaining wetland. We planted 4000 wetland plants. We created upland forest areas and an arboretum by planting 500 native trees and shrubs. Additionally we established meadows, and rain gardens. As a third grader said, "a day in the wetland is always a great day." Many teachers are utilizing the outdoors to enhance student learning. The physical education classes are held outside every day, weather permitting. As students are reading about seeds or frogs, they go outside and to find, compare, or collect different examples of what they are studying, including Marsh Hibiscus seeds or frogs and tadpoles in their natural habitat. Education of the natural world has become more real and relevant because plant and animal life cycle studies are experienced in the outside classrooms.

One of our greatest examples of our commitment to sustainability and community partnership is the Science Museum, a five-week, school-wide inquiry-based investigation of our watershed that is infused with authentic STEM experiences. Starting with students' questions, students and teachers move through the process of inquiry. Community partners assist students with various parts of their projects. The process culminates in a final celebration as students display and communicate their findings to community members and other grade levels. Learning is transformed; teaching is transformed. As a first year teacher said, "this is how teaching should always be."

Our district continues to increase our energy efficiency, reduce our environmental impact, and improve our healthy school environment. The district has policies and improvements that manage energy and water use, reduce waste production, and improve health, safety, and food standards. As a school, we have reduced our environmental impacts by incorporating native plants and permeable pavers; reduced the amount of solid waste by recycling, composting, and educating others about recycling and other environmentally friendly actions; and reduced the amount of energy used in school and at home by increasing awareness through energy audits and exploration of renewable energies. We set high standards for health and wellness of students and staff including improvements in air quality from our idle-free school policy, healthy mental and physical fitness programs such as our Mustang Marathon, and our Backpack program that addresses poverty and healthy food choices.

We share the success of our sustainability efforts, healthy environment, and our outdoor classrooms with our numerous community partners. Our partners volunteer their expertise, time, and support throughout our projects. Their contributions are invaluable to us and to student learning. For example, Bay-Wise Master Gardeners have helped us to organize and plan with student teams, design planting areas, and work with students with planting and the Junior Wildlife Gardener program. We expect the strong community commitment and support to continue far into the future.

One highlighted celebration of our efforts occurred in 2013 when Governor O'Malley spent an afternoon with our students in our wetland and the nearby Pomonkey School Stream. Our vision for the outdoor classrooms utilized much of the Governor's Children in Nature research and action plan. His visit was an affirmation of the efforts that our school made in connecting children to the outdoors.

Perhaps one student best summarizes our efforts, "We believe we all need connection to nature to best understand the world around us. We are making better choices to conserve our resources and to live healthier lives."

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)

1. MAEOE Green School Program- J.C. Parks was certified green school in 2010 and recertified in 2014. From the recertification letter, "The school has succeeded in using a holistic, integrated approach to incorporate local environmental issue investigation with environmental best management practices and community stewardship. The school community has acted to empower youth to practically apply knowledge at school, home and in their communities to reduce pollution, decrease waste, increase habitat, and create healthy learning and living environments."

Three teachers from J.C. Parks will present at the annual MAEOE conference in February 2015. Their presentation is entitled, NGSS and CC mash Up: Science Museums Transforms Teaching.

2. National Wildlife Federation's Eco-Schools USA Green Flag Award- J.C. Parks received this national and international award in May 2014. To be awarded for the prestigious Green Flag Award, Parks accomplished criteria in seven areas. Parks demonstrated "a holistic program that strives to make environmental awareness and action an intrinsic part of the life and culture of a school".

3. Bay-Wise Certified -Demonstration Landscape- A team of evaluators measured the health school landscape with the Bay-Wise Yardstick checklist. The Yardstick includes environmentally sound practices: controlling storm water runoff, encouraging wildlife, protecting the waterfront, mowing/fertilizing properly, managing yard pests with IPM, mulching/recycling appropriately, and planting wisely. J.C. Parks earned one of the highest scores for the Bay-Wise landscapes in Charles County.

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)

2015

Chesapeake Bay Trust: Environmental Teacher of the Year, Deanna Wheeler

2014

Charles County Heritage Award- Conservancy for CC

Recertified- Maryland Green School

NWF Eco-School USA- Green Flag

NOAA Climate Steward Grant- \$2500

Governor's Schoolshed Initiative Grant- \$1500

2012

Bay-Wise Certification for environmentally healthy school grounds

2011

Lowe's Grant- \$100,000

Robotics- Community Partnership Award

CBT Grants- EE and Restoration- \$37,100

2010

Robotics- multiple awards including Award of Excellence, the state's highest award for solving an environmental problem

2000-2014

Grants/field trip expenses through Chapman Forest Foundation, Friends of Chapman State Park, Sierra Club, CBF, Alice Ferguson Foundation, National Building Museum, National Geographic, and CBT- \$7000

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

Yes or No **Yes**

Percentage reduction

Over (m/yr – m/yr) **6/11-12/14**

Initial GHG emissions rate (MT eCO₂/person)

Final GHG emissions rate (MT eCO₂/person)

Offsets

How did you calculate the reduction?

Using EPA's Method for Calculating Carbon Sequestration by Trees in Urban and Suburban Settings, on average for the number of trees planted, J.C. Parks sequestered approximately 5000 lbs of equivalent CO₂ per year. This calculation does not include CO₂ sequestered from the additional 4300 shrubs and plants and 2 meadows.

In general, the conditions in wetlands lead to the accumulation of organic matter in the soil and sediment, which makes wetlands one of the most effective eco-systems for storing soil carbon. According to the Natural England Research Report NERR043- Carbon storage by habitat: Review of the evidence of the impacts of management decisions and condition of carbon stores and sources, the amount of CO₂ sequestered from the installation of J.C. Parks wetland is approximately 4800 lbs of equivalent CO₂ per year.

Energy is conserved through school-wide motion sensitive lights, temperature controls, and automatic shutdown of all computer devices in the evenings.

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

Yes

If yes, what is your score? **71**

If your score is greater than 75, have you applied for and received ENERGY STAR certification?

If yes, what year?

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

Yes

Current energy use (kBtu/student/year)

Current energy usage (kBtu/sq. ft./year) **52**

Percentage reduction **13%**

Over time period (m/yr – m/yr) **7/03 --**

6/14

How did you document this reduction?

Utility Manager Software

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

On-site renewable energy generation **None**

Type generated

Purchased renewable energy **None**

Type purchased

Participation in USDA Fuel for Schools, DOE

Wind for Schools or other federal/state

school energy program **No**

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

Year **1967**

What is the total building area of your school? **75,692 sf**

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

No

For new buildings: Percentage of building area that meets green building standards Certification and year received

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) **Not available**

Current water use (gallons/occupant) **134 gallons per month per occupant**

Percentage reduction in domestic water use

Percentage reduction in irrigation water use **100% (no irrigation)**

Time period measured (m/yr – m/yr) Usage was average in 2014

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

The water supply system is monitored by a flow meter and recorded on the monthly reports.

Parks does conserve water usage throughout the building with:

1. Hand sinks with controlled water spray
2. Lower flow toilets
3. Education- signage above sinks to conserve water

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

J.C. Parks uses rain gardens and a wetland to divert and collect rainwater for outdoor use. The school does not have an irrigation system in place. In school, students created signs posted at each sink to encourage people to reduce the amount of water used.

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

During the past 15 years, only native plants have been used in landscaping. Within the past 4 years, students under the guidance and assistance of community non-profit groups have planted over 4500 native plants. We have created upland forested areas, an arboretum with over 250 native plants, rain gardens, and channels with plantings within and along the banks to divert water to the newly installed wetland. In addition we have created two meadows from native plant seeds to attract nature.

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

J.C. Parks has upgraded the stormwater ditch into a wetland system capable of reducing the sediment suspension carry. In addition, 30% of the runoff from the adjacent middle school has been rechanneled to the wetland. This system with

the additional aquatic plant life, 2 rain gardens, 2 meadows, and 2 upland forested areas added into the wetland basin area has reduced the chemical and nutrient runoff from both schools.

The school has installed permeable pavers on a 210 ft. walkway and picnic table area in the front of the school as part of the outdoor classroom project in fall 2014.

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.

CCPS has a Maryland licensed Water Works Superintendent and Operator for its onsite water supplies. The district performs all mandates and recommended water testing in compliance with the safe water drinking act and the Maryland departments of the Environment. Annual onsite wellhead protection inspections are completed. The district completes the required lead and other contaminants testing and has submitted them to the State. They are in record onsite. This district is committed to supplying safe and potable water to all its schools.

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.

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

68.8 cubic yards

B - Monthly recycling volume in cubic yards (recycling dumpster sizes(s) x number of coll emptied or collected) **16 cubic yards**

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) **classrooms participate in vermicomposting**

Recycling Rate = $((B + C) \div (A + B + C) \times 100)$ **19%**

Monthly waste generated per person = $(A/\text{number of students and staff})$ **0.08 cubic yards per person**

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?

10% – 35% of the copy paper content is post-consumer material. Other classroom paper content is 100% post-consumer material.

CCPS uses chlorine-free office and classroom paper.

23) QIC3: Provide information on the amounts, monitoring, and disposal method for each of the materials below.

Flammable liquids.	Removed annually and chemicals are recycled
Corrosive liquids.	Removed annually and chemicals are recycled
Toxics.	Removed annually and chemicals are recycled
Mercury and/or mercury compounds.	Removed from the district between 2003-2005
Other	

Amounts vary annually. CCPS uses a licensed disposal company. Each year, by June 15th, the person who is in charge of removal is notified and has access to the chemicals. The chemicals are listed on a form, with amount, container type, and hazard rating. Then the chemicals are removed according to safety protocols for each chemical.

24) QIC4: Describe other measures taken to reduce solid waste and eliminate hazardous waste.

CCPS purchases green materials and equipment. Working through the administration, the district has controlled the open ordering of supplies. These actions reduce the amount of solid waste produced by the school system and each school.

Students and staff have started a Trash-Free Fridays initiative to aid in the reduction of solid waste.

Over 250 students each year participate in vermicomposting as they create and maintain worm composters.

Recycling bins are located throughout the school building including each classroom and office space. An e-recycling bin is located in the front of the school. The school has implemented using rechargeable batteries for use in the classrooms and offices. In the science room alone, over 50 rechargeable batteries are used for microscopes and other electronic devices. Toner cartridges from all printers are recycled at Staples. The school has participated for 2 years in the TerraCycle program.

School newsletters and announcements are all electronic. Teachers use the backs of papers or scrap paper whenever possible for assignments.

In 2014, The Destination Imagination Team partnered with MOM's Organic Market to collect denims, plastic bags, shoes, and batteries to reduce the amount of trash from our students.

3rd graders create posters for the school each year to educate students and staff about the 4 Rs.

Yearly repurposed recyclables for projects:

- Art- school-wide projects
- Kindergarten unit- Taking Care of the Earth.
- Egg Drop- School-wide event

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

Which green cleaning custodial standard is used?

What percentage of all products is certified? **100%**

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

J.C. Parks uses three different products for cleaning. All are certified by Green Seal or EcoLogo.

26) QID1: Describe alternative transportation at your school

What percentage of your students walk **0%**, bike **0%**, bus **90%**, or carpool **10%** (2 + student in the car) to/from school? (Note if your school does not use school buses)

How is this data calculated? **From CCPS transportation data base**

27) QID2: Which policies and practices has your school implemented?

Yes Designated carpool parking areas

Yes A well-publicized no-idle policy that applies to all vehicles including school buses

Yes Vehicle loading/unloading areas at least 25 feet from school building air intakes, doors, and windows

N/A Safe Pedestrian Routes to School or Safe Routes to School

28) QID3: Describe activities in your "safe routes" program.

The district has received the safe schools grants for a number of elementary and middle schools in 2014. The \$564,000 grant was to provide sidewalks, crossing lights, and curb cut

outs to allow students to safely walk to school.

29) QID4: Describe how your school transportation program is efficient and has reduced its environmental impact.

The Idle-free Zone reduces the environmental impact of the school transportation program.

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

J.C. Parks recently completed a wetlands upgrade. This upgrade provides surface water runoff a place in which sediments and suspended particles can settle out. Aquatic plant life can filter the additional water components and chemicals prior to entering the Pomonkey School Stream, a tributary of the Mattawoman Creek and part of the Chesapeake Bay watershed.

The wetland/outdoor classroom project was a joint effort between the school and multiple non-profit groups. Initially, the Bay-Wise Master Gardeners from the Charles County Extension Office assisted a team of students and staff to evaluate the school grounds to look for areas that can be improved for wildlife habitat, erosion control, and restoration. With the help of a landscape architect, the team gathered input from students, staff, parents, community members, and community groups. The process involved 3 charettes and several presentations to the school community which resulted in input from over 100 individuals/groups. Incorporating the input, conceptual drawings were created that transformed the school turf into outdoor classrooms that would improve and restore the land and the water that runs off the land. Throughout the process, the connection of the school grounds to the nearby forest, home to one of the healthiest tributaries (Pomonkey School Stream) of the Chesapeake Bay and designated as an Important Bird Area, Wildland, and FIDS (forest interior dwelling birds) habitat, was the focus as the school's runoff directly enters the forest to the stream. Any change would directly impact the stream and forest.

The wetland project included rechanneling water from the adjacent middle school's impervious surfaces, driveway and parking lot, and the water drainage from their HVAC system to the wetland. This additional water along with 100% of the water that drains from J.C. Parks settles in the wetland before entering into the Pomonkey School Stream. The wetland area includes two rain gardens within one of the channels, two meadows, and two forested areas and several areas with shrubs. Over 4250 native plants were incorporated into these areas to allow the water to soak into the land and/or slow the speed of the water traveling down to the wetland. In the fall of 2014, the school completed an additional section, an arboretum in front of the school with over 250 native trees and plants.

Other ongoing environmental efforts include raising awareness of runoff from stenciling the stormwater drains to collecting trash on the school grounds and sweeping up extra road salt before it enters the drains. Students monitor the water quality through stream surveys of the banks, macro-invertebrates, and water testing of the wetland, Pomonkey School Stream, and the Potomac River.

31) QIIA1: Describe your school's Integrated Pest Management efforts, including IPM/green certifications earned, routine inspections, pest identification, monitoring, record-keeping, etc.

The school district is inspected by the state of Maryland and found to be in compliance.

Policy statement

Integrated pest management: CCPS uses a proactive Integrated Pest Management (IPM) program. The IPM program includes routine inspections or surveys of all school facilities to identify conditions conducive to pest invasion, to ensure early detection of pest presence and to monitor infestation levels. CCPS attempts to use alternatives to pesticide application, such as employee education, source reduction, inspection and identification of potential problem areas.

Pesticides are used only as a last resort. State law requires that parents of all elementary school children be notified prior to all pesticide applications. Parents of middle or high school students who want to be notified prior to pesticide applications must request in writing that they be placed on the school system's pesticide notification.

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 only pesticide applications performed are those for termites. These applications are drilled into the substructure (concrete) of the facility and sealed. Applications are performed during times when students are out of the building for a weekend or extended holiday. Generally applications are completed on a Friday evening allowing time for the internal envelope to exhaust and perform a number of air exchanges.

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

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

34) QIIA4: Describe how your school manages and controls student and staff exposure to chemicals (including pesticides) routinely used in the school.

The district performs inventory of all chemicals allowed in the schools. The system employs a green chemical standard for its housekeeping chemicals.

There are no routine pesticides used in our schools. The district has taken since the 1990s an IPM approach and found that providing a sealed and controlled envelope continue to be a successful strategy.

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

J.C. Parks has eliminated the use of air fresheners, cleaners, and all other fragrant sanitizers. The school uses green products with the low fragrant odor. The building service workers vacuum after hours each day with HEPA filter vacuums. J.C. Parks uses catch mats at doors to limit dust and dirt entering building.

J.C. Parks established an Idle-free Zone for all vehicles.

The district has replaced triggering asthmatic chemicals with green chemicals components.

The district replaced the use of chlorine or bleach using a safer quat solution. The district also conducts IAQ (indoor air quality) inspections monitoring air quality. Any occupant can also have their concerns addressed with the use of the Occupant IAQ Concern Profile.

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.

Wet and/or moldy materials are removed upon notice. IAQ testing are performed as part of the inspection. Dehumidifiers and air systems are added and or modified to expedite the lowering of the internal humidity levels.

An environmental checklist is performed that includes HEPA vacuuming registers, wiping down all surfaces, rug cleaning, and the maintenance of ceiling tiles.

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.

As a district, the HVAC systems are all cleaned on an annual p.m. schedule. All HVAC systems that have filters and belts are changed and replaced on a scheduled cycle. At this time units are inspected in-between the scheduled p.m. to insure proper operation and cleanliness. If any operational or cleaning issues are found the technician will resolve that issue or put in a work order that will be scheduled immediately.

Monitoring of the school's ventilation system occurs frequently. Filters are regularly inspected and changed. HEPA vacuums are used to clean the registers. The registers are also wiped down to remove any particulates.

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.

School is controlled through an EMS system. The program on the units opens the outside air dampers to a preset minimum position on startup to ensure proper outside air to the occupied space.

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.

CCPS implemented Tools for Schools back in the 1990s and has a district employee assigned to all environmental safety issues.

The district has a licensed environmental specialist, maintaining certifications as a national health specialist, AHERA Inspector/Management Planner, Water and Waste water operator and Superintendent, and Maryland registered Environmental Sanitarian.

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.

The school lunch program has changed dramatically over the past several years to incorporate daily healthy food, vegetarian choices, fresh fruit, and vegetables. Salt is not added to any food. All pasta and bread are whole grain.

J.C. Parks participates in the Breakfast program for the past two years where 90% of the students eat breakfast at school. 100% of the teachers have noticed an improvement with students' attention.

J.C. Parks also offers a summer lunch program each day for students as a community drop-in program.

Nutritional snacks are served for staff functions.

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.

The students have multiple daily outdoor exercise opportunities. All classes (K-5) use the large field area for PE class. While in class students are engaged in team play activities, as well as individual skills activities. Pedometers are used during PE to encourage movement in all students, regardless of fitness levels and athletic abilities. FitnessGram data is collected twice a year, beginning of the school year and end of the school year. Data is used to show growth, encourage students in good cardio respiratory endurance and muscular endurance activities both at school and at home. Students are also provided a recess time with their classroom teachers every day.

The outside classrooms provide spaces for classes not only for structured learning but also nature recreation. Classes eat lunch or snacks at outdoor picnic tables, explore the wetland and meadows, walk around the forested areas. As one child said, "It's nature's playground."

Outdoor activities include:

1. 30 minutes daily of outdoor recess (when temperature is above 31 degrees)
2. 50 minutes of Physical Education classes outside (weather permitting) every 5-6 days
3. FitnessGram utilized twice per school year (per CCPS)
4. Jump Rope for Heart during the month of February- Jumping occurs outside when weather permits.
5. Dream Team (physical education role-model club) once a week
6. Unified sports team –once a week
7. School-wide walking program (adults and students) – once a month
8. School-wide Mustang Marathon -- a walk-a-thon to promote exercise and healthy lifestyles
9. EPA's Sunwise Program is used with grades 3-5 each June

Mustang Marathon- Each year our school promotes healthy living, eating, and habits through its Mustang Marathon, Jump Rope for Heart, and Wellness Wednesday Messages to staff and students. The Mustang Marathon includes a 3-week, school-wide focus on health living habits through assemblies, announcements, and class instruction. The culminating event is a celebration as the entire school participates in a day of outside walking.

Students work outside regularly in outdoor classrooms-

Students ask to go to the wetland in both warm and cool weather. In the fall of 2013, 125 3rd graders this fall spent a minimum of 25% of science classes outside as they were studying organisms, lifecycles, seeds, adaptations, and different habitats. 5th graders worked outside at least 15% of science to study the schoolyard habitat.

Staff Wellness Walk in nature on the Indian Head Rail Trail are organized twice a year. There are also staff pedometer challenges and volleyball games throughout the year.

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.)?

None known

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

Yes, J.C. Parks uses a Coordinated School Health approach.

Briefly describe the health-related initiatives:

- Partnership with 6 other nearby schools to sponsor a community health and wellness day to be hosted at our feeder high school
- Wellness Wednesdays- During announcements, the school body learns tips to keep healthy
- Backpack Friday- With a partnership with S.H.A.R.E. Food Pantry, 25 students receive a backpack full of healthy food each weekend.

Does your school partner with any postsecondary institutions, businesses, nonprofit organizations, or community groups to support student health and/or safety? **Yes**

- Charles County Health Department provides vision, hearing, and dental screenings and flu mist.
- Health Partners, a non-profit organization, provides quarterly dental health services to our children of poverty.
- S.H.A.R.E. Food Pantry provides food for the Backpack program
- Local businesses and non-profits sponsor the Mustang Marathon, a month of healthy activities culminating in a school-wide walk-a-thon
- Bryans Road Fire Department- Provides fire safety and prevention for all students

Does your school have a school nurse and/or a school-based health center? **Yes**

List and/or describe any efforts to support student mental health and school climate (anti-bullying, peer counseling, etc.)

J.C. Parks uses a coordinated student mental health approach that includes 2 guidance counselors, a psychologist, a pupil personnel worker, and an outside counselor from Tri-County Youth Services. As a team, they provide numerous services for the students from a school-wide character trait program, group and individual counseling, peer mediation, and classroom guidance to student services program to discuss and provide the needed services for identified students.

The Anti-bullying program is initiated and reinforced through the school counselors and Just Say No club. Each year, every student in grades 3-5, completes an anti-bullying project such as a brochure, poster, or PowerPoint. These projects are shared with other classes and displayed throughout the school.

Monthly classroom lessons (conducted by the school counselors) focus on character traits and mental health supports. Tri-county counselor provides individualized support to 10 mentally fragile students (sessions conducted once a week).

For thirteen years, J.C. Parks has reached the highest standard as a Positive Behavioral Interventions and Supports (PBIS) school. This program addresses student behavior with the emphasis on school-wide systems of support that include proactive strategies for defining, teaching, and supporting appropriate student behaviors to create positive school environments.

District Coordinated Health Approach

The Partnerships for a Healthier Charles County (PHCC) was established in 1994 to serve as a community health network and as a forum for collaboration and sharing of information between county agencies and services. Over thirty non-profit and county agencies are represented in the membership.

The mission of the Partnerships for a Healthier Charles County is to serve as a community health network and forum for collaboration to identify and address the health needs of our community. The vision of the Partnerships for a Healthier County is to improve the health and quality of life for all Charles County citizens with the goal of increasing life expectancy across all racial and ethnic groups.

Executive leadership of the PHCC is shared by the heads of four local entities: the Charles County Department of Health, Charles County Public Schools, University of Maryland Charles Regional Medical Center, and the College of Southern Maryland. A steering committee composed of representatives from each of the four entities serves as an advisory board to the executive leadership. The steering meeting meets quarterly to set the priorities and direction of the coalition.

44) QIIIA1: Describe how environmental and sustainability literacy concepts are integrated within multiple disciplines and grade levels.

At the elementary level, CCPS utilizes curricula infusion with Environmental Literacy Standards. The bulk of the standards are addressed in the Science Content block with a few addressed in Social Studies and Art. With infusion, natural connections are made with content being delivered through the context of the environment.

J.C. Parks 5th grade students participate annually in MWEE at Nanjemoy Creek EE Center. Students take an active role in integrated learning experiences that require them to make observations, create models, collect and analyze data, ask questions, make inferences, work as a team and more. Students connect with the watershed and other place-based systems through activities that promote systems thinking. Sustainability concepts are addressed through the Trash Free Lunch program and Watershed Stewardship. With the Trash Free Lunch Program, students are made aware of the growing problem of waste and are introduced to possible solutions, such as, reduction, reusing, recycling, composting (bin, vermicomposting, bokashi). Students walk away with understanding that reducing is the first step in sustainable living and the trash is the last option. The watershed stewardship program discusses land use and natural resources. Again, students utilize systems thinking to make inferences and create models to better understand the dynamics of land use and the health of the watershed. Stewardship and student action is discussed through the interactive model.

Each December during Polar Week, all students learn about the Polar Regions, changes that are occurring in those regions, and how those changes affect us.

Activities have included the following:

- Polar Scientist visitations each year
- Announcements about the Polar Regions
- Daily warm up activities for all grade levels
- Non-fiction texts for all grade levels
- Experiments
- Video segments for all grade levels
- School-wide presentations by polar educators (Einstein Fellows)
- Writing polar scientists around the world- 4th grade
- Polar connection webinars
- Exchange with a polar elementary school-small group
- School-wide field trip to adjacent middle school
- Art, Music, PE, Computers, and Media integrate polar activities, too.

Each May, the entire school celebrates the wetland. Students and staff spend time in the outdoor classrooms, observing, listening, and recording everything that is happening in the wetland. Each day brings another story. On Wetlands Day, guest volunteers share their expertise with the students about the wetland and connections to nature.

45) QIIIA2: Describe how environmental and sustainability concepts are integrated into classroom-based and/or school-wide assessments.

Environmental and sustainability concepts are integrated into all levels of instruction in Charles County Public Schools. Our elementary curriculum covers these contents in the primary grades as they learn about units on recycling and vermicomposting. In pre-kindergarten and kindergarten, they use the Growing Up Wild curriculum from Project Wild to explore nature; In 1st and 2nd grade they learn about plants and butterflies; In grades 3-5 in instructional units including weather and climate, processes that shape the Earth's surface, and energy transfer in ecosystems. These units are tested with countywide pre and post tests. Statewide MSA test for 5th grade science also assesses knowledge and understanding on environmental and sustainable concepts. 5th grade science students participate in a field experience at the Nanjemoy Creek Environmental Education Center in Charles County. This experience allows students to learn about the watershed and sustainability efforts that can support the environment. Assessment is incorporated into their field journal for this experience.

Throughout the year (Polar Week, Wetland Days), a focus on addressing environmental and sustainability issues is integrated within daily small group and whole group reading lessons through non-fiction material and research. Formative and/or summative assessment occurs daily throughout the language arts class. A five-week, school-wide science museum conducted in the spring incorporates classroom collaboration and presentations on environmental/sustainability topics. Students are assessed throughout the project.

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.

Total number of teachers and administrators – 54

1. MAEOE conference presentation and scholarship awardees- Jan. 2015- 3 teachers
 2. ICPRB Workshop on Watersheds- 14 hours, Fall 2014- 2 teachers
 3. Early Childhood Growing Wild Training- Feb. 5, 2014 - 7 teachers
 4. Five environmental education presentations during staff meetings each year on classroom connections to the wetlands, Polar Regions, STEM night, science museum, and recycling - Entire staff and administrators
Examples:
 - A. December 2010- 2014: Polar activities with presentations on new resources during first staff meeting in December
 - B. May: Wetland presentation on resources and activities during the first staff meeting in May. In 2013, the entire staff completed a cattail activity
 - C. Annual Dumpster Diving- 5 minute in-service to entire staff to dive into the staff lounge trash can to see if there are misplaced recyclables that belong in the recycling bin
 - D. Green School updates
 5. STEM/Green School Professional Learning Community meets each 4th Wednesday of the month. Through discussion of current strategies, they create and coordinate school-wide STEM/environmental activities and provide information to their respective grade/content level team.
 6. NOAA Climate Stewards -1 teacher- 11 Webinars, 6 book clubs conference call discussions (2014- 2015)
 7. 17 hours of webinars- Outdoor Education Hangout, Ice Cores, and Anthropogenic- that Pesky Word- 2014- 1 teacher
 8. Data and the Estuary through NOAA, MD DNR, and CBF- Summer 2014- 1 teacher
 9. Environmental Literacy Workshop- April 2014- 1 teacher
 10. In-school on green cleaning products- full staff and administration- 2013
 11. Green Classroom Professional – 2013- 1 teacher
 12. Governor’s Schoolshed In-service 2013 - 1 teacher
 13. Educator’s workshop and presentations at science conferences on polar education in Norway (2010) and Montreal (2012)– classroom connections on climate change- 1 teacher
 14. PolarTREC Teacher aboard an icebreaker in the Chukchi Sea- Aug. 2012 for 3 weeks
 15. Wonders of Wetlands (WOW) training and Planning of Wetlands (POW)-during the past 4 years 12 teachers
 16. Project Wild Aquatic – June 2014 – 2 teachers
- District Professional Development:
17. Kerry Wixted (Department of Natural Resources) will be presenting approximately 3 sessions on field investigations (as it relates to MWEE) for approximately 60 teachers (K-12).

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

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.

1. Spring Science Museum- A school-wide, 5-week inquiry-based and authentic STEM experience for students on the watershed (See question 53 for a detailed explanation)

2. Integrated STEM units for 4th grade based on environmental themes- erosion and water quality- Students participate in 6 week investigations using the engineering design process – Ask, Imagine, Plan, Create, Experiment, and Improve. For example, as geotechnical engineers, students engage in argument from evidence about the best location to place a bridge to cross a river. Their explanations are based on tests from building models of the soil conditions at various locations along the river, compacting the soil to different depths, measuring the loads that the various soils conditions can hold, examining the river and its changes over time to determine patterns of erosion, weighing costs of compaction, and including the human factors of the residents. Throughout the process, the students ask questions, develop models, test, use math, interpret and analyze data, construct explanation, and engage in argument.

3. Water quality testing- Students have been involved in testing and analyzing the quality of the water and how it impacts the watershed for over 10 years. STEM topics evolve naturally from these investigations. For example, students recently asked if the road salt applied in the winter will affect the wetland as they learned that particular organisms survive well in certain salinity levels. As a result, they will carry out investigations this winter to explore this question to make claims with evidence and explain with reasoning.

4. Egg Drop from recyclables- Egg Drop is a school-wide, cross-curricular activity that celebrates recycling and re-using. Each year, students use the engineering design process to determine the best materials to design a container for an egg to be dropped from 80 feet. Students engage in argument based on the results of their tests and then final drop as to which recycled material provides the best protection for their egg. Students gather evidence through non-fiction text, model testing, and research.

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.

With the advent of College and Career Readiness standards, Charles County has begun alignment and implementation of those standards within our science curriculum. Examples of this implementation include opportunities for our students to use close reading non-fiction texts focused on the environment and sustainability at all levels where curriculum has a connection. Students can read about current environmental problems and issues, and also learn about the way scientists are approaching those problems as a means to solve them. Science students also have opportunities at the elementary school level to investigate human impact on both the environment and local ecosystems. This investigation takes place through local field trips to the school watershed, as well as reading activities focused on issues within the local watershed and environment. These reading activities also provide the opportunity for our students to learn about the various environmental careers that exist.

The month of January is devoted to college awareness. J.C. Parks Elementary School is currently the only school in Charles County that has taken fifth grade students on a mini college tour. Students spent the Day at the College of Southern Maryland, rotated to three classes, toured the campus and learned about the admissions process through games. We also had a College Spirit Week including activities such as wearing anything with a college logo on it, interviewing parents about their college experiences or their choice not to go, creating a college walk which included the staff alma maters and researching a college of the student's choice. Daily college facts announcements and a student created college pennant display rounded out our activities. Through guidance classroom activities students in grade K through 5 have the opportunity to explore a variety of career options including those related to the environment and sustainability. Speakers are invited to share what they do on the job with our students at our annual Career Day. Also, students in grades 3 – 5 have career projects. Students must decide on a career choice and design a project based on their research.

During Polar Week and Wetland Days, polar scientists, Einstein Fellows, environmentalists, and other professionals interact with students about their careers. Students from 3rd and 4th grade have written letters to polar scientists from around the world to ask them about their jobs. 4th graders also research current "green" technology jobs in the renewable energy unit of study in science. Green housing techniques are explored at the National Building Museum and through videos of the College Solar Decathlon Challenge. Students learn about careers that have an impact on the future first-hand with the design and installation of J.C. Parks arboretum with its emphasis on green, sustainable materials including permeable pavers.

50) QIIC1: Describe how students conduct age-appropriate civic/community engagement projects integrating environmental and sustainability topics.

1. Governor's Day of Service- Invasive removal of Japanese Stiltgrass and trash clean up at the Pomonkey School Stream with Governor O'Malley. (Fall 2013)

2. Bay Wise Student Robotic- Teams comprised of six 5th grade students each year who researched, planned, and helped to install the wetland and butterfly way station with the assistance of community partners. The students met for 75 minutes each week after school from October through April. They created PowerPoints, plays, songs, and movies about their projects to present to the PTO, administration and the robotics judges.

3. World Water Monitoring Day- Students participate in monitoring the water quality of the nearby streams, creeks, and rivers. Students are able to sign out LaMotte water testing kits to test the streams in their own yard or community.

4. Recycling and Reducing- Students are involved in promoting recycling, reducing water, and turning off the lights campaigns.

5. Trash Clean Ups- Throughout the school year, the students pick up trash on the school grounds and at the Pomonkey School Stream.

6. Hatch, Raise, and Release programs- students participate in the yellow perch, horseshoe crab, and shad programs and successfully released yellow perch and shad back into Mattawoman Creek and Potomac River.

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

The science museum, an inquiry-based experience (question 53), incorporates meaningful outdoor experiences at each grade level.

In addition, students participate in water monitoring since 2003 in order to connect land use to water quality in the schoolshed. Probeware and LaMotte kits are used to collect data throughout the school year. Students analyze the data and make inferences through critical thinking. If issues have been identified, students research solutions. Schoolshed water monitoring helped push projects such as the storm drain stenciling and schoolyard redesign. The schoolyard redesign includes a wetland, meadow, forest, arboretum, and outdoor learning spaces. Runoff and water quality has improved through these student-centered projects.

Each spring, the 4th graders travel to a Chapman State Park along the Potomac River. Students examine how humans impacted the land and water. They compare the biodiversity and water quality to J.C. Parks'. This field trip is a collaboration between our school and community volunteers from Chapman Forest Foundation, Friends of Chapman Forest, Mattawoman Watershed Society, Nanjemoy-Potomac Environmental Coalition, Nanjemoy Creek Environmental Education Center, and Maryland DNR. These volunteers assist to make this trip a meaningful watershed experience for our students. Each year since 2004, approximately 130 students and 25 adults participate in the field trip.

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.

We have **community partnerships** with the following organizations:

Bay Wise Master Gardeners- Since 2009, Bay-Wise Master Gardeners have assisted us with direct support to students as well as staff (2009-present). Ronda Goldman, the head of the Bay-Wise Master Gardeners, helped to establish the Student Bay Wise teams. With weekly meetings (2009-2011), she helped to facilitate the group to measure the quality of the schoolyard and then plan how to improve the grounds. Bay-Wise Master Gardeners has supported us with many resources such as volunteers with specialized skills (landscape architect, designers, and skilled laborers) to volunteers for planting days, for Bay-Wise Certification (2012), Governor's visit (2013), Wetlands Days, and evening STEM nights.

Nanjemoy Creek Environmental Education Center- NCEEC has supported us beyond the 5th grade field trip experience with resources during planning of our wetland, with special presentations (Wetland Day) 2012 -2014, with assistance with field experiences at Chapman State Park, J.C. Parks wetland, and the Pomonkey School Stream. They also assisted us with the installation of the arboretum in the fall of 2014. We were able to support them as we provided two trainings for their staff (POW and WOW).

Chapman Forest Foundation, Mattawoman Watershed Society, Southern Maryland Audubon Society, Charles County Government Public Facilities, Charles County Planning and Growth Management, Sierra Club, and Atlantic Kayak- These organizations regularly volunteer at all of our outdoor celebrations from Wetland Days, the Governor's Day of Service, water testing at Chapman State Park, and evening STEM nights, to establishing field trips at Chapman State Park from 2004 to the present and assisting in planting. They support us with our projects with expertise, labor, and materials such as mulch, compost, birdhouses, and maps. They also keep us informed as to what may be happening in our area of Charles County.

Friends of Chapman State Park- We have worked with volunteers from this group to design fieldtrips to Chapman State Park. They are committed to outdoor education and rely on J.C. Parks to assist them with expanding the field trip opportunities for students. They recently formalized their desire to expand as they have asked teachers at Parks to be apart of their board as the education coordinator.

Boy Scouts and Girl Scouts- Both groups have helped install the outdoor classrooms (2011) and the arboretum (2014) along with planning 4 additional work/planting nights in the summer to help complete the installation. They have continued to help maintain the wetland on a yearly basis from trash removal, excess algae removal, and watering. They were eager to assist in or project as they are grateful that they can hold their meetings at Parks. They feel that their assistance with the outdoor classrooms is a way that they can give back for the use of the school. An Eagle Scout completed his project at Parks by installing the picnic tables and benches throughout the wetland area.

PolarTREC/Einstein Fellows/NSF Polar Programs/NOAA/ and Polar Scientists- Support from these groups enhance the learning experience for the entire school community. The community followed the expedition aboard an icebreaker ship as one teacher experienced "real" science about the changing Polar Regions and engaged and communicated the experience to the community through webinars, blog posts, presentations, and on Good Morning America. Each of these groups has contributed materials, presenters, grants, and expertise for Polar Week each year. Parks' science partners, **Drs. Lee Cooper and Jackie Grebmeier**, who present at the school at least once a year, have helped Parks form relationships with schools in the polar regions and have inspired students to see a larger, connected world. In recognition for their educational outreach, J.C. Parks has nominated Dr. Grebmeier for the National Medal of Science.

Lowe's- Lowe's of La Plata, Maryland, supports J.C. Parks with the management of the Lowe's \$100,000 grant for the outdoor classrooms. They contribute their time and expertise to help manage and support the material ordering and installation of the outdoor classroom spaces.

Environmental Concern-assisted with the entire wetland installation, permitting process, and trainings

Maryland DNR- assisted with Governor's Day of Service, Governor's Schoolshed Initiative, invasive species lessons, and classroom programs including training and participating for 2-3 years in each of the following programs- horseshoe crabs, yellow perch, sturgeon, and blue gill.

Water Environment Federation- supports J.C. Parks with expertise and LaMotte water testing kits to participate in World Water Monitoring Day. They sponsored fieldtrips for 5th graders to the World Water Monitoring Day Celebration Day with over 50 representatives from government and NGOs conducting hands-on activities for students.

Other school partnerships described in earlier questions include: **Health Partners, Tri-County Youth Services, and S.H.A.R.E. Food Pantry.**

Another way that J.C.Parks contributes to the community is through the outdoor classroom project. This project has brought many people together in our community to work for the good of the community, groups that would not have worked together in the past such as a local storeowner and an environmental group. The wetland also serves as a safe outdoor area where families bring their children to explore on weekends. As one of our building service workers once said, "I go out every evening to take a break and listen to the frogs. It is place where I can find peace."

53) QIIIC4: 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.

Spring Science Museum:

Inspired by a NSTA article, "Collaborating for Success: A School-wide Science Museum Highlights Science Practices with Help from Community Partners" by Eleanor Miele and Stephanie Bennett, J.C. Parks Elementary School created an environmental science culture that transforms teaching into an inquiry based experience and authentic STEM experience for students and teachers, alike. This article in *Children and Science* outlines a map to integrate NGSS and Common Core into the classroom using researched-based and creative practices to "do science like scientists". Parks adopted this simple science museum process to create an environmental watershed-based museum. The process included: selecting an essential question from the science scope based on the schoolshed; record and display student's questions about the essential question; emphasize what student's want to find out rather than what they want to know; help students select content-rich readings to research their questions; conduct hands-on investigations; prepare and post students' written text based on their research and investigations; prepare and display physical artifacts for the science museum; and allow students the time to communicate and argue their findings to their class, parents and other grade level students.

Moving to a facilitator's role, teachers were challenged to let go of the traditional teaching approach to allow students to lead their own investigations. This new role created some anxiety. Initially teachers were concerned about utilizing all of the time (~3 hours per day for 5 weeks) and incorporating the required common core standards. Teachers found that the students asked questions that needed to be covered in the curriculum; that the students were more engaged in learning; that the classroom became a more vibrant learning center; that all students were invested in their own projects, and that more time than the 75 hours could be used.

Within the research process, the school used many partnerships (question 52) and field experiences to gather evidence for projects. Wetland Day and field trips to Chapman State Park, Pomonkey School Stream, St. Mary's City, and nature centers (Clearwater and NCEEC) were essential components for students to develop their claims about their inquiry-based investigations. We found that civic projects and STEM projects evolved naturally as student's identify human impacts in the watershed. Student projects included removing invasive species and trash from Chapman State Park and the Pomonkey School Stream, investigating what types of trash is on the school grounds and how the trash travels, determining what type of trash enters the wetland, investigating water quality issues, and identifying possible solutions to reduce the amount of trash including developing a water filtering system, trash removal devices, and recycling campaigns.

The final celebration, science museum, included students' work displayed throughout the building on walls, floors, and tables. In May 2014, over 125 community members attended the celebration. Every student communicated their research and investigation to the adults. The celebration continued throughout the day as grade levels paired together to learn from each other. One kindergarten teacher whose students investigated worms and vermicomposting retells a story of one of her students gently taking a hand of a fourth grader and saying, "It's ok. I was afraid of worms, too, but they can't hurt you. They make good dirt for us."

Teachers and students are looking forward to the next science museum in May 2015.