U.S. DEPARTMENT OF EDUCATION

GreenRibbonSchools

2019 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 early learning to 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 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. The Department of Defense Education Activity (DoDEA) is not subject to the jurisdiction of OCR. The nominated DoDEA schools, however, are subject to and in compliance with statutory and regulatory requirements to comply with Federal civil rights laws.
4. OCR has not issued a violation letter of findings to the public school district concluding that the nominated public school or the public school district as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan to remedy the violation.
5. The U.S. Department of Justice does not have a pending suit alleging that the public school or the public school district as a whole has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
6. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the public school or public school district in question; or if there are such findings, the state or public school district has corrected, or agreed to correct, the findings.
7. The school meets all applicable federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

U.S. Department of Education Green Ribbon Schools

☒ Public ☐ Charter ☐ Title I ☐ Magnet ☐ Private ☐ Independent ☐ Rural

Name of Principal: Ms. Paula Trantham

Official School Name: Abbotts Creek Elementary School

Official School Name Mailing Address: 9900 Durant Road, Raleigh, NC 27614

County: Cumberland State School Code Number: 920303

Telephone: 919-694-0555 Fax: 919-694-0571

Web site/URL: www.wcpss.net/abbottscreekes Email: abbottscreekes@wcpss.net

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

Paula Trantham Date: 02/04/19

(Principal's Signature)

U.S. DEPARTMENT OF EDUCATION
GreenRibbonSchools

Name of Superintendent: Mrs. Cathy Moore

District Name: Wake County Public School System

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


Date: 2/5/2019
(Superintendent's Signature)

Nominating Authority's Certifications

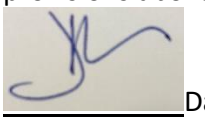
The signature by the Nominating Authority on this page certifies that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of the Authority's knowledge.

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

Name of Nominating Agency: NC Department of Public Instruction

Name of Nominating Authority: Mr. Jon D. Long, Architect, School Planning

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


Date: 2/15/19
(Nominating Authority's Signature)

SUBMISSION

The nomination package, including the signed certifications, narrative summary, documentation of evaluation in the three Pillars, and photos should be submitted online according to the instructions in the Nominee Submission Procedure.

OMB Control Number: 1860-0509
Expiration Date: March 31, 2021

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.

U.S. DEPARTMENT OF EDUCATION
GreenRibbonSchools

2019 Green Ribbon Schools Application

School Contact Information:

School Name:	Abbotts Creek Elementary School
District Name:	Wake County Public School System
School Address:	9900 Durant Road
City:	Raleigh
State:	NC
Zip:	27614

School Website:	https://www.wcpss.net/abbottscreekes
Facebook Page:	https://www.facebook.com/brinchekscience/
Principal Name:	Ms. Paula Trantham
Principal Email:	ptrantham@wcpss.net
School Phone Number:	919-694-0555
Lead Applicant Name:	Krista Brinchek
Lead Applicant Email:	kbrinchek@wcpss.net
Phone Number:	978-835-4052

School Information:

School Type:	Public
Grades Served:	Elementary Pre-K-5
District Type:	Suburban
Current Enrollment:	866
Attendance Rate:	98%
Graduation Rate:	100%

Does your school serve 40% or more students from disadvantaged households? No

% Receiving FRPL:	24.6%
% Limited English Proficient:	10%
Other Measures:	none

Is your school in one of the largest 50 districts in the nation? Yes

Summary Narrative:

Provide a summary narrative describing your school's efforts to reduce environmental impact and costs; improve student and staff health; and provide effective environmental and sustainability education. Focus on unique and innovative practices and partnerships.

Abbotts Creek Elementary School (ACES) is an ideal candidate for the Green Ribbon as our school continuously looks for ways to improve and implement student and staff health, reduce our environmental impact, and through our unique science special provide school and community outreach with a focus on environmental and sustainability education.

Pillar I: ACES opened in the fall of 2015. Our school was built adjacent to a recently closed, repurposed, Wake County landfill. Every day as our students arrive or depart our campus, they see "Mount Trashmore" as they have fondly heard it called. This unique location has given our school the ability to daily connect students authentically to sustainability, environmental issues, and being active stakeholders in reducing our environmental impact in our school and our community.

Our school's heating/cooling system for the building is centrally controlled and has the ability to differentiate conditions for various areas. This central control allows the building to maintained to a certain temperature without tampering with individual classrooms/areas. It also allows certain areas of the building heating/cooling to be turned off during non-use time, saving electricity and costs. Students are only allowed to use certain doors for exiting and entering the building, reducing the impact outside air entering the building. With over 800 students entering and exiting multiple times a day, the reduction in access points provides an energy savings. Each classroom and office space within the 103,724 square foot building is equipped with motion sensor lights. Our motion detector lights and switches are configured to automatically turn off lights after a certain period of no movement, which indicates that no one is in the room. Besides saving money, the motion detection light switches help reduce our impact on the environment.

ACES has 74 bathroom sink faucets. 50 of these faucets are water saving timed push faucets. These timer faucets will only dispense water if the button is being pushed, reducing water usage, reducing our environmental impact while creating a cost savings. 100% of ACES landscaping was designed to feature native plants and other vegetation adapted to our climate and annual rainfall eliminating the need for an irrigation system. A rain barrel positioned to collect water near the Monarch Waystation allows students and families to water the milkweed and pollinator plants during extended heat conditions.

ACES was designed and constructed with a stormwater runoff retention pond to help settle sediments prior to entering a nearby stream. Multiple stormwater drains around campus lead to the retention pond. The pond is an approximate 1-acre wet, which collects and treats stormwater runoff from the campus (~ 20 acres). In wet detention basins, a permanent pool of standing water is maintained by the riser— the elevated outlet of the wet detention basin. Water in the permanent pool mixes with and dilutes the initial runoff from storm events. Wet detention basins fill with stormwater and release most of the mixed flow over a period of a few days, slowly returning the basin to its normal depth. Runoff generated during the early phases of a storm usually has the highest concentrations of sediment and dissolved pollutants. Because a wet detention basin dilutes and settles pollutants in the initial runoff, the concentration of pollutants in the runoff released downstream is reduced.

Our school grounds has been certified by the National Wildlife Federation as a Wildlife Habitat. To be recognized ACES demonstrated our campus has food and water availability, wildlife cover, places to raise young, and sustainable practices. Our campus has old growth trees, various native berry plants, shrubbery at varying heights, and multiple blue bird nest boxes.

ACES has been innovative in our waste reduction practices. The Environmental Research and Education Foundation partnered with ACES and performed a waste stream analysis to determine how much and what type of wastes were generated in our cafeteria. Food waste was determined to be the bulk of our waste stream. With that knowledge, and the help of EREF, ACES developed a waste reduction plan. The first phase of the plan was to provide additional educational opportunities to staff and students on how to reduce waste, while generating additional stakeholders by forming a Parent Green Team. Cafeteria staff created and posted additional kid friendly

signs helping students understand what food they were able to choose from, and how to correctly judge proportion sizes which has reduced the amount of uneaten food waste from the cafeteria. The second phase included having the Parent Green Team initiate a small-scale food waste diversion and enhanced recycling program. Every week, parents with the help of students, collect (2) 5-gallon buckets of food waste, and additional cafeteria materials that can be recycled and bring them to the nearby convenience center for processing. Other waste reduction initiatives include; Crayola ColorCycle- a program where our school collects used markers and ships them back to Crayola for recycling. "These Come From Trees" paper waste elimination project. On each of the (4) copy machines, and on each paper towel dispenser in the building a picture of a tree and a "These Come From Trees" sticker is prominently displayed. The program estimates that each sticker saves approximately 100lbs of paper/year. Using that data figure, ACES saves over 1,000lbs of paper a year. Our partnership with Wake County Recycling includes participation in the Feed The Bin program. Paper waste is collected weekly from classrooms by student Green Team helpers. ACES has calculated that 6 CY/month of recyclable paper is collected and processed. Cardboard is collected and picked up weekly from the cardboard recycling dumpster. Our school is a proud partner in DonateSport.org, a charity started and operated by an ACES family to collect donations of used sports clothing and equipment to give to those in need in the USA and around the world. Not only is this a waste reduction effort, it is helping others and reducing the environmental impact of manufacturing. In 2019 ACES has switched to compostable trays in the cafeteria, reducing the material in landfills that is not biodegradable.

ACES per the Wake County Public School System (WCPSS) does not use hazardous materials within the building. Ecoclab is a Green Seal Certified product used for approximately 80-90% of cleaning. ACES bathroom product supplier EcoLogo is certified for reduced environmental impact.

ACES significantly reduces environmental impact and increases student health by our alternative transportation numbers and carpool procedures. Through our innovative technology-based carpool loading, at least (8) students are loaded simultaneously. Students are cued up prior to their car entering the loading zone through online system. This significantly shortens carpool time and reduces car idling. Approximately 71% of our student population walks, bikes, bus, or carpool to and from school daily. ACES participates annually in a Walk to School day, encouraging healthy habits and reduction in fossil fuels.

Pillar II: Our entire school community is dedicated to the health and wellness of our students and staff. Our school has a full-time custodian during the day, and a night cleaning crew to ensure our school is clean. A schedule is followed for dusting, mopping, vacuuming, and cleaning surfaces reducing allergens that could impact the health of our students. The custodian also performs daily checks and is our "first responder" for any potential environmental or health hazards within and around our building. WCPSS has multiple staff in all areas of facilities to ensure any environmental or health issues are addressed and remediated promptly with professional staff. WCPSS believes in IPM and therefore has significantly reduced the usage of pesticides around campus. Strict rules and regulations are implemented with the WCPSS regarding the usage of pesticides reducing any potential student exposure.

Our PE teacher has created a run club that meets twice a week before school, she participates with students in the WCPSS First in Fitness Program which allows students to compete with other schools in various events. Our PE teacher organizes meet ups for students and parents to represent Abbotts Creek at local 5K races, encouraging student and family health. Monthly "Health Challenge" calendars are sent home to encourage daily physical activity and promote healthy nutrition habits. Students can bring the calendar back at the end of the month

signed to receive recognition for completion. Primary classroom teachers have initiated a Girls on the Run program promoting health and wellness of our young female students. ACES annual Walk to School day promotes physical activity while encouraging reducing our carpool numbers. ACES media specialists initiated the tower garden within the library, a hydroponic growing system that is incorporated within the curriculum to promote healthy eating and ACES music teacher initiated within our school a staff health program encouraging staff members to get healthy while losing weight. This innovative program offers accountability within the group and provides the support needed to be successful. Weekly challenges are provided both in nutrition and physical activity and group activities are scheduled to keep motivation high.

ACES student's emotional health is critical to foster growth and learning. Our students are reminded daily that our classrooms are family by hosting "Morning meetings" allowing students to form emotional connections to each other. Our counseling services at ACES include individual counseling, group counseling, classroom guidance lessons and crisis assessments. At ACES guidance is a special class that every student K-5 sees at least once per month. Curriculum is planned to follow the developmental competencies outlined by the American School Counseling Association. Some of the topics include study skills, being a good friend, stopping bullying, goal setting, test tips, social emotional learning with lessons on coping skills. Individual counseling services are available to serve the needs of students who have both momentary issues and long-term needs. Students can self-refer or refer a friend for services. Our school is a Positive Behavior Intervention & Support (PBIS) system. The mission of PBIS is to create and sustain a safe, nurturing school climate in which students can maximize learning

ACES partners with multiple organizations to improve the health and safety of our students. Backpack Buddies currently supports 36 students at ACES by providing students from low-income households with 10-12 lbs of nutritious food for the weekend. Our partnership with Green Chair Project provides beds to students who are in need and helps furnish homes for families that are moving out of homelessness into permanent housing. Raleigh Police Department provides monthly seminars for safety and wellness for all fifth-grade students. Kerr Family YMCA provides onsite before and after school care promoting health and wellness activities. Scholarships are available for students who demonstrate a need.

ACES strives to establish a culture that demands equity and improved student achievement for every student. ACES Equity Team was formed with the mission to vigorously work to understand and defy the inequities that exist within the school system. ACES ensures equity, diversity, and cultural competency are part of the strategic planning and collective dialogue.

Pillar III: Our science special curriculum for K-5th grade has been developed with an Environmental Literacy/Green STEM focus. Our school feels very strongly about promoting a love of nature that will help students become stewards of the environment and exciting them to pursue STEM careers.

Sustainability and environmental connections are seen throughout our school, in the classrooms, in our Green STEM/Environmental Literacy Science Special, and through partnerships with local STEM professionals. Sustainability starts with our student Recycling Feed the Bin helpers, in the cafeteria through our enhanced recycling/food waste diversion program with the Parent Green Team, through our Parents who founded and implemented at our school the company Donate Sport to bring gently used sports equipment to those students in need while keeping those materials out of the landfill. Staff and students are reminded to use paper wisely as each copy machine and paper towel dispenser features a "These Come From Trees" sticker as part of the paper

waste elimination project. Our partnership with Environmental Research and Education Foundation gave us a better understanding of our cafeteria waste stream allowing us to make changes in how we educate and reduce our waste, while providing an opportunity to integrate Art through an EREF sponsored "decorate the trash can" program. Within the classroom, sustainability and environmental cross curricular connections abound. Our unique partnerships with the NC Natural Science Museum, Carolina Clean Air, and Wake County Solid Waste and Recycling have provided hands on, authentic educational opportunities. Our students connect environmentally through their primary classrooms and through a unique Science Special class that has developed curriculum with an Environmental lens. Students in K-5th conduct real data collecting through various Environmental Citizen Science Projects such as CoCoRaHS rain gauge data collection, NestWatch on 4 bluebird boxes, MonarchWatch raising and tagging wild Monarch Butterflies, Tomatoshphere growing and collecting data on seeds that have been on the international space station, Shad in the Classroom- performing/understanding water quality analysis, human impact on Shad population from overfishing and dam construction, Purple Air Quality Monitoring- providing real time air quality information to Purple Air website, and trail motion sensor cameras to document what wildlife is found on school grounds. Environmental STEM professionals visit or skype with students deepening their understanding of the environment and professions. Abbotts Creek also has an Envirothon Team, where students can dive deeper into the Environmental Sciences and compete with Middle Schools regionally. In 2018 ACES Envirothon Team qualified at Regionals and advanced to State competition. Our Environmental connections and human impact do not end with the students. Every year our school organizes and runs a Big Sweep Litter Cleanup within our school's watershed and organizes other community outreach events such as a viewing of the documentary "STRAWS" which discusses the risks of one time use plastics. ACES yearly Science Fair not only showcases student's projects, but also includes a STEM Symposium of various Green STEM professionals such as NCSU Turtle Rescue Team, Wildlife Biologists, Herpetologists, and Solid Waste Engineers. Through education within the classrooms and community ACES is providing authentic environmental, sustainability, and student health understanding while significantly reducing our human impact to the environment.

Participation and Awards:

1. Is your school participating in a local, state or national school program, such as EPA ENERGY STAR Portfolio Manager, EcoSchools, Project Learning Tree, or others, which asks you to benchmark progress in some fashion in any or all of the Pillars? No

2. Has your school, staff or student body received any awards for facilities, health or environment? Yes

Year	*Award Received*
2014	North Carolina Entomological Society Educator of the Year
2016	Honeywell Educator of Excellence Sustainability Fellow *Our teacher participated and is highlighted in info video: https://www.youtube.com/watch?v=i_wU7yprqKo
2016-2017	North Carolina Natural Science Museum Educator Forum

2017-2018	North Carolina Natural Science Museum Project Based Learning Fellowship
2016	Wildlife Habitat Certification (School Campus)
2016	Monarch Waystation Certification- Monarch Watch
2018	North Carolina Outstanding Earth Science Educator of the Year
2018	North Carolina Science Teacher Association District 3 Elementary Science Teacher of the Year

Pillar I: Reduced Environmental Impact and Costs

Energy:

1. Can your school demonstrate a reduction in Greenhouse Gas emissions? ☒ Yes ☐ No

- Percentage reduction: 6.5% Over: 7/17-8/18
- Initial GHG emissions rate (MT eCO2/person): 3.1
- Final GHG emissions rate (MT eCO2/person): 2.9

How did you calculate the reduction? Energy Star Portfolio Manager ** Each classroom and office space within the 103,724 square foot building is equipped with motion sensor lights. Our motion detector lights and switches are configured to automatically turn off lights after a certain period of no movement. Besides saving money, the motion detection light switches help reduce our impact on the environment.

2. Do you track resource use in EPA ENERGY STAR Portfolio Manager? ☒ Yes ☐ No

- If yes, what is your score? 82
- If score is above a 75, have you applied for and received ENERGY STAR certification?

  ☐ Yes ☒ No Year: Certifications have been suspended by EPA

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

- Current energy usage (kBTU/student/year):
- Current energy usage (kBTU/sq. ft./year): 30.9
- Percentage reduction: 9.6%
- Time period: 07/17 - 08/18
- How did you document this reduction? Energy Star Portfolio Manager

4. What percentage of your school's energy is obtained from:

- On-site renewable energy generation: Type: N/A

- Purchased renewable energy: Type: N/A
- Participation in USDA Fuel for Schools, DOE Wind for Schools or other federal or state school energy program: ☐ Yes ☒ No

5. In what year was your school originally constructed? 2015

- What is the total building area of your school? 103,724 square feet

6. Has your school constructed or renovated building(s) in the past ten years? ☒ Yes ☐ No

For new building(s):

- Percentage building area that meets green building standards: N/A
- Total constructed area: 103,724 square feet
- Certification and year received: N/A

For renovated buildings:

- Percentage of the building area that meets green building standards: N/A
- Total constructed area: N/A
- Certification and year received: N/A

Water and Grounds:

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

- Average Baseline water use (gallons per occupant): 687.4 Gallon/Student/Year – 1st year school operational 2015 Student population 580- Student population was NOT at the 2018 number of 881
- Current water use (gallons per occupant): 883.8 Gallon/Student/Year for 866 students – At least 50 faucets within the building are on a push timed flow.
- Percentage reduction in domestic water use: 28% Increase – Student population has increased by 301 students since 2015
- Percentage reduction in irrigation water use: 0%
- Time period measured: 09/2015-09/2018
- How did you document this reduction? (ie. ENERGY STAR Portfolio Manager, utility bills, school district reports): Energy Star

8. What percentage of your landscaping is considered water-efficient and/or regionally appropriate?

100% water efficient and/or regionally appropriate

- Types of plants used and location: None of the landscaped areas, or Monarch waystation garden are irrigated. Many plants are native to NC, and the rest are adapted to our climate and annual rainfall.

9. Describe alternate water sources used for irrigation: At Abbotts Creek we have a rain barrel that is used by students and families to water the native Monarch Waystation Milkweed plants during extended extreme weather.

10. Describe any efforts to reduce stormwater runoff and/or reduce impermeable surfaces: Our school is multi-story, reducing our impermeable footprint. The school was built adjacent to a Raleigh Parks and Recreation Center- allowing parking during peak hours for school events or community events to be shared. With the joint design (constructed simultaneously) two stormwater retention ponds were constructed to reduce stormwater runoff to nearby streams, preventing pollution and creating an aquatic habitat which is used for learning.

11. Our school's drinking water comes from: Municipal water source

12. Describe how the water source is protected from potential contaminants: The City of Raleigh Public Utilities Department provides customers with water that meets and or exceeds all Federal and State drinking water regulations. Primary reservoirs for Raleigh have a "Study Plan for the Ongoing Assessment of Water Quality".

13. Describe the program you have in place to control lead in drinking water: The Wake County Public School System has a Water Quality Management team that monitors school water quality, manages wastewater collection, treatment, and disposal from individual schools. Abbotts Creek was built in 2015 and the Water Quality Management Team was involved during the construction and continues to oversee our water quality.

14. What percentage of the school grounds are devoted to ecologically beneficial uses? Our entire school grounds have been certified by the National Wildlife Federation as a Wildlife Habitat. To be recognized as such, areas must meet the guidelines for: Food availability, water availability, wildlife cover, places for wildlife to raise young, and sustainable practices.

Waste:

15. 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): The average monthly garbage produced and disposed of at ACES is **72 cubic yards**. This number is based on a waste collection of three times per week with an eight cubic yard dumpster ¾ full at time of pick up. Our school currently serves 866 students.

B - Monthly recycling volume in cubic yards (recycling dumpster sizes(s) x number of collections per month x percentage full when emptied or collected): At Abbotts Creek, Styrofoam lunch trays, bottles and cans are recycled under Child Nutrition Services contract. Currently, the cubic yard volume is not available for those recyclables. However, our school services 866 students every day within the cafeteria for both breakfast and lunch. Our cardboard is recycled at 32 cubic yards per month, and Abbotts Creek is part of Wake County's Feed the Bin program. Through the Feed the Bin Program we estimate that 1.5 CY of paper is recycled every week, giving a monthly recyclable number of 6 cubic yards per month.

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): At Abbotts Creek, the Parent Green Team provides a Food Waste Diversion program once per week in the cafeteria. The team collects (2) 5-gallon buckets of food waste to bring to the Wake County Compost Convenience Center. Every bit of food waste kept out of the landfills makes a difference. We calculated that our efforts divert .2 cubic yards per month. In 2019 our school switched from Styrofoam to compostable lunch trays, and negotiations are underway to secure a compost contract to include these and divert them from the landfill. ACES also has a small vermicomposting operation used primarily to teach students about alternative ways to dispose of food scraps, while incorporating a plethora of science concepts.

- Recycling Rate = ((B + C) ÷ (A + B + C) x 100):

  ((38 CY + .2 CY) / (72 CY + 38 CY + .2 CY) * 100) = 34.7%

- Monthly waste generated per person = (A/number of students and staff):

  103 Staff & 866 Students = 969 people: 72 CY / 969 = .07 CY/Month

16. 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? WCPSS orders most of the paper for all the county school under multiple contracts and distributes it to the schools as requested. Only a small portion is purchased by and sent directly to ACES from vendors and parents, therefor numbers cannot be determined.

17. List the types and amounts of hazardous waste generated at your school: No Hazardous Materials are used at Abbotts Creek. Not for Science or for cleaning or other purposes.

- Describe other measures taken to reduce solid waste and eliminate hazardous waste: Each week the Parent Green Team collects (2) 5-gallon buckets of food waste from the students in the cafeteria and bring it to the Wake County Convenience Center Food Compost Area. In addition, fruit and vegetable scraps are collected weekly for vermicomposting in the Science classroom. Student government in 2018 has been working on implementing additional recycling in the classrooms and educating students on waste reduction methods.

18. Which green cleaning custodial standard is used? Cleaning products are peroxide based (Green). The primary cleaner used in WCPSS is ECOLAB Peroxide Glass and Surface Cleaner, it is used for all general cleaning. WCPSS is analyzing other green cleaning products, that may be introduced at a later time.

- What percentage of all products is certified? ECOLAB is used for approximately 80-90% of cleaning
- What specific third party certified green cleaning product standard does your school use? ECOLAB is Green Seal certified. All bathroom paper supplies are certified by EcoLogo.

Alternative Transportation:

19. What percentage of your students walk, bike, bus, or carpool (2 + student in the car) to/from school? (Note if your school does not use school buses): 71%

- How is this data calculated? Walk/Bike (5)-Documented w/ Tags, Bus riders (524)-Documented w/ Tags, Daycare Van (25)-Documented w/Rosters, Carpool-2+students/car (60)- Averaged during carpool loading 614 students/866 total students = 71%

20. Has your school implemented?

☒ Vehicle loading/unloading areas are at least 25 feet from building air intakes, doors, and windows.

☒ Safe Pedestrian Routes to school or Safe Routes to School

- Describe activities in your safe routes program: In 2018 the Abbotts Creek Greenway trail opened which is part of the larger Raleigh Greenway system, to our school. This connector trail is part of the Bedford and Falls River Communities which are part of our school's base population. As warmer weather arrives, we anticipate additional walkers and bikers to utilize this new route to school. In 2018 we initiated Walk To School Day on the trail.

21. Describe how your school transportation use is efficient and has reduced its environmental impact: Abbotts Creek has a separate bus, carpool, and walker pickup locations, reducing wait time and idling. To significantly decrease wait time and idling in carpool, online technology is utilized to que up students when their carpool number is called, and at least 8 cars are loaded at one time.

22. Describe any other efforts toward reducing environmental impact, focusing on innovative or unique practices and partnerships: In 2018 5th grade students performed a project-based learning initiative focused on air quality at our school. We partnered with Clean Air Carolina who provided us with a real-time purple air monitor, which we set up in our carpool lane. Students monitored the air quality numbers online during various times of the day to determine if morning and afternoon carpool times had decreased air quality. Students used their research and their data to create posters about air quality and provide tangible ways to increase air quality in their communities. Posters were showcased at the Community Center to reach a larger community audience.

Pillar 2: Improve the Health and Wellness of Students and Staff

Environmental Health:

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

The Wake County Public School System had adopted an Integrated Pest Management (IPM) Policy for managing insect and rodent intruders at our schools. IPM is a holistic, preventive approach to managing such pests. IPM minimizes pesticide use in our schools and on school grounds. For the last ten years, WCPSS has concentrated on removing pest habitats from schools rather than using pesticides for pest management. For the purpose of this notification, pesticides fall into (2) categories; The first is "exempt" pesticides that are relatively low risk/non-toxic. The second is "non-exempt" pesticides having relatively higher risk/toxicity. As of July 1, 2007, "non-exempt" pesticides are NOT used inside any WCPSS building. We are the first school system in North Carolina to achieve this level of "green" pest management.

WCPSS is required under the "School Children's Health Act" [(NCGS 115C - 47 (45) (a)] to notify all students' parents, guardians, and custodians as well as school staff of the schedule of "non-exempt" pesticide use in and on WCPSS property. Further, the statute requires WCPSS make available any updates to the schedule upon request.

The Environmental Health and Safety Department has prepared an annual "notification" and "request for notification" documents to comply with statute-specific guidelines. These documents are located on the WCPSS website in the "Parents" section.

2. What is the volume of your annual pesticide use (gal/student/year)? Describe efforts to reduce use: For the last ten years WCPSS has concentrated on removing pest habitats from schools rather than using pesticides for pest management making the amount negligible per gall/student/year.

3. Which of the following practices does your school employ to minimize exposure to hazardous contaminants? Provide specific examples of actions taken for each checked practice:

☒ Our school prohibits smoking on campus and in public school buses.

☒ Our school has tested all frequently occupied rooms 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 our school was built with radon resistant construction features and tested to confirm levels below 4 pCi/L. Our school was constructed in 2015 and was tested at that time. WCPSS has been working with the North Carolina Department of Environment and Natural Resources over the last several years testing some of our schools.

4. Describe how your school manages and controls student and staff exposure to chemicals (including pesticides) routinely used in the school: IPM is employed instead of using pesticides. Cleaning products are peroxide based (Green). No chemicals are used in elementary School Science classes. WCPSS is also reviewing additional Green cleaning systems.

5. Describe actions your school takes to prevent exposure to asthma triggers in and around the school: Abbotts Creek does not allow smoking on campus. Idling is discouraged (see above). The WCPSS custodial policy calls for: Bi-weekly dust mop/sweep all tile floors, vacuum carpet, Weekly: low dust all horizontal surfaces to height of 84", damp mop and buff hallway tile floors, mop tile floors in classroom, Monthly; high dust areas accessible with 6' ladder to include horizontal surfaces.

6. 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: Water leaks are reported to the WCPSS Facilities Emergency Hot Line. A contractor is dispatched to evaluate the problem. Potential mold problems are also reported to the Hot Line. WCPSS Facilities has a staff member specifically assigned to respond to reports of potential mold.

7. Our school has installed local exhaust systems for major airborne contaminant sources: Yes, bathrooms are separately exhausted to the outside. The mechanical room is direct vented to the outside and has fresh air make up for the space

8. 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: All HVAC filters are changed every 3 months along

with a check of belts and cleaning if necessary. Inspections and preventative maintenance is performed annually on all HVAC equipment, and coils are cleaned at least every 2 years.

9. Describe actions your school takes to ensure that all classrooms and other spaces are adequately ventilated with outside air, consistent with state or local codes, or national ventilation standards: The HVAC system has fresh air makeup that met the code requirements at the time of installation. Building was constructed in 2015.

10. 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: Our full-time custodian performs building checks daily. He is the "first responder" to any potential building and facilities issues. If a potential issue is found, such as a water leak, facility malfunction, fire hazard, or any other safety issue he immediately contacts ACES Administration and WCPSS facilities management.

Nutrition and Fitness:

11. Which practices does your school employ to promote nutrition, physical activity and overall school health? Provide specific examples of actions taken for each checked practice, focusing on innovative or unique practices and partnerships:

☒ Our school has an on-site food garden.

Our media center has a Tower Garden that is incorporated into the media curriculum. Students learn, grow, and then harvest/eat the produce once mature. Connections are made to healthy eating, science of a plant/growing, and food availability locally and around the world.

☒ Health measures are integrated into assessments

Students in 2nd-5th grade are assessed on health-related fitness measures.

12. Describe the type of outdoor education, exercise and recreation available: In addition to PE class, students also spend 30 minutes a day for recess, teachers encourage physical activity. Our school has 2 playgrounds with climbing and balance equipment, as well as a large soccer field and track. Throughout the year, run club encourages students to be active. Students run laps and receive recognition when certain mileage milestones are accomplished. Outdoor education also takes place with numerous teachers taking students outside for learning opportunities, and our Science Specialist frequenting outside with students in K-5th for Citizen Science projects, Monarch Waystation/Pollinator Garden learning, Nest Monitoring on Bluebird Boxes, retention pond for life cycle curriculum.

13. Describe any other efforts to improve nutrition and fitness, highlighting innovative or unique practices and partnerships: The Run Club meets twice a week to help students get their bodies moving before school. Our PTA organized fun run fundraiser in 2018 that promoting mental and physical health. In 2017 the city's Greenway Trail system, opened a connector trail to ACES. This new trail allows access to several neighborhoods adjacent to our school. ACES had our first Walk to School day in 2018 promoting this new access for walkers/bikers. ACES partners with the American Heart Association teaching students the importance of having a healthy with exercise and nutrition. ACES organizes a staff health group encouraging weight loss through healthy eating and exercise.

Coordinated School Health, Mental Health, School Climate, and Safety

14. Does your school use a Coordinated School Health approach or other health-related initiatives to address overall school health issues? If yes, describe the health-related initiatives or approaches used by the school: Yes, Nursing services are provided based on an acquity model. Nursing services provide oversight for policies and procedures as outlined by Wake County Public Schools and Health and Human Services.

15. Does your school partner with any postsecondary institutions, businesses, nonprofit organizations, or community groups to support student health and/or safety? If yes, describe these partnerships: Yes, ACES collaborates with multiple community partners as follows:

- The Kerr Family YMCA supports onsite before and after school programing care promoting health and wellness activities.
- BackPack Buddies serves 36 students at ACES. It is a program designed to provide children from low-income households with 10-12 pounds of nutritious kid friendly groceries for the weekend when free school lunches and breakfasts are not provided. The Food Shuttle works with each school system and individual schools to identify need. School officials at each site then identify students to receive BackPack Buddies.
- ACES has partnered with the Green Chair Project in Raleigh to not only provide beds to students who don't have one, but also to help furnish homes for families that are moving out of homelessness into permanent housing.
- The Raleigh Police Department provides monthly seminars for safety and wellness for all fifth-grade students.
- The Abbotts Creek Community Center was constructed adjacent to the Elementary School. The construction project of the two schools was a joint venture with Wake County Government and Wake County Public School System to promote health and wellness within the school community.

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

17. Describe your school's efforts to support student mental health and school climate (e.g. anti-bullying programs, peer counseling, etc.):

At Abbotts Creek we strive to create a safe, nurturing, school climate in which students can maximize learning. This is accomplished through classroom teachers, and our unique school counseling department. The counseling department at Abbotts Creek has many programs that work in the background of students learning in order to support the needs of our population. Our services include individual counseling, group counseling, classroom guidance lessons and crisis assessments. Individual counseling serves the needs of students who have both momentary issues and long-term needs. We have a multifaceted referral system for counseling, including written referrals (we call them "counselor grams") students can write to see the counselor, a google form connected to a QR code for teachers and parents to fill out, and take written and verbal requests for counseling as well. Group counseling helps serves the needs of students who are experiencing similar problems as their peers. For instance, when several fourth and fifth graders were having issues getting along with their classmates, the counseling professionals created a social skills group that met for six sessions. In the 2018/2019 school year, several of the

small groups that have met have been; anger management groups, anxiety groups, and groups for students new to the school. Towards the end of the school year, a test anxiety group will be formed to help students cope with the stress associated with yearend testing.

Our counseling department not only provides individual and small group student services, but at ACES we have prioritized mental health by creating a Guidance Specials class, where EVERY student K-5 sees the counselor at least once per month. Curriculum is planned to follow the developmental competencies outlined by the American School Counseling Association. Some of the topics include study skills, being a good friend, stopping bullying, goal setting, test tips, responsibility, etc. This year, lessons have a special focus on social emotional learning with lessons on coping skills.

Abbotts Creek embraces and implements Positive Behavior Intervention & Support (PBIS) system. The mission of PBIS is to create and sustain a safe, nurturing school climate in which students can maximize learning. The basis for our school wide behavior expectations follow the acronym for our school ACES; Act respectfully, Cooperate with others, Exercise self-control, and Safety first. Students are taught what these expectations look like in each part of the school, for example hallway ACES are different then classroom. In each area of the school (classrooms, hallways, cafeteria, bathrooms, playground) ACES expectations are visible to students on large posters to help reinforce what their behavior should look like. In the beginning of the year, a school wide assembly is held to teach students about ACES, throughout the year, "booster" sessions are held to re-teach expectations to referred students who might need additional support in various ACES areas.

ACES established an Equity Team in 2018. The team consists of teachers, and administration staff. The mission of the team is to vigorously work to understand and defy the inequities that exist within the school system. ACES ensures that equity, diversity, and cultural competency are part of the strategic planning and collective dialogue. ACES strives to establish a culture that demands equity and improved student achievement for every student. ACES is seeking ways to change the status quo and to disrupt the predictability of student achievement based on race, gender, and SES.

Pillar 3: Effective Environmental and Sustainability Education

1. Which practices does your school employ to help ensure effective environmental and sustainability education? Provide specific examples of actions taken for each checked practice, highlighting innovative or unique practices and partnerships:

☒ Our school has an environmental or sustainability literacy requirement.

WCPSS has implemented EL Education's curriculum, it is a comprehensive, standards-based core literacy program that engages teachers and students through compelling, real world content. In multiple modules, environmental & sustainability are the focus. For example, in 3rd grade a module has students diving into water scarcity/abundance around the world and the impacts socially and environmentally that brings. 5th grade students focus on natural disasters, what they are, how they happen and the local and global impacts from them. These modules connect literacy standards with real life environmental issues and the science behind them.

☒ Environmental and sustainability concepts are integrated throughout the curriculum.

Our science specialist is an Environmental Engineer who has converted over to teaching. It is her mission to develop curriculum incorporating science concepts through an Environmental lens to help students connect with and reduce environmental impact. She works closely with primary classroom teachers enhancing and extending science concepts. When creating lessons with a Green STEM focus, technology, engineering, and mathematics are naturally connected. Live nature webcams are viewed daily to allow students to connect with nature in a unique way. The webcams provide opportunities for critical thinking skills, and science/literacy connections. Each of the 866 students within our school keeps a Science Notebook. This promotes authentic literacy skills while developing scientific skills. Students create scientific drawings, record data, and learn how to produce informational text, as well as learn how to write reflectively. Students daily collect data and submit electronically for various Citizen Science projects. As mentioned above, our school's unique placement next to a closed landfill provides an authentic way to learn and discuss, learn and practice sustainability. Students are self-motivated to create solutions to reduce our school's waste and look for ways to reduce impact within our larger community.

☒ Environmental and sustainability concepts are integrated into assessments.

As guided by the North Carolina Essential Standards and Common Core Standards, environmental and sustainability concepts are integrated into both formative and summative assessments. Project Based Learning is implemented to showcase critical thinking, creativity, and real-world relevance.

☒ Students evidence high levels of proficiency in these assessments.

Standardized formatives assessments for science essential standards are administered only to fifth graders. According to data released by the North Carolina Department of Instruction, ACES has exceeded or met expectations every year since our school opened in 2015.

☒ Professional development in environmental and sustainability education are provided to all teachers.

North Carolina provides environmental education certification with dozens of courses available to teachers. Many of these courses are available for little to no cost through the NC Natural Science Museum and Raleigh Parks and Recreation. The ACES science specialist who is part of the environmental education program and has presented at the NC Environmental Educators yearly conference, frequently notifies staff regarding upcoming classes. Our Science Specialist a former environmental professional geologist also offers guidance with non-formal PD if classroom teachers would like to incorporate a new environmental or sustainability concept into their curriculum.

2. For schools serving grades 9-12, provide:

- Percentage of last year's eligible graduates who completed the AP Environmental Science course during their high school career: N/A
- Percentage scoring a 3 or higher: N/A

3. How does your school use sustainability and the environment as a context for learning science, technology, engineering and mathematics thinking skills and content knowledge?

Our science specialist uses our location adjacent to the closed landfill as a teaching point. She has developed the curriculum for K-5 with a Green STEM/Environmental Literacy focus. She collaborates with Wake County to bring

in outreach educators to help discuss the landfill and has developed lessons to help students understand where their waste goes, the environmental issues associated with landfill construction/closure, and lessons on how students can help reduce waste at our school. curriculum incorporates a citizen science project for each grade level, some of her citizen science projects include; CoCoRAHS, Trail Cameras, Shad in the Classroom and the Cornell Lab of Ornithology Nest Monitoring Program. Her Citizen Science projects focus on the natural world and authentically becoming connected to it. She has partnered with North Carolina State University Turtle Rescue Team to bring rehab turtles into the science classroom, using them as a vehicle to discuss habitat loss and various ecosystem and living organism science standards. Environmental issues bring critical thinking skills to students through real life situations. Mathematics is incorporated naturally throughout the curriculum. For example, CoCoRaHS has students measuring rain fall amounts daily, which then can be graphed weekly, monthly, yearly.

4. How does your school use sustainability and the environment as a context for learning green technologies and career pathways?

At ACES, classes frequently participate in skyping and onsite visits with Environmental Scientists & Engineering professionals. Some examples include NOAA marine biologist whose research is helping endangered marine species, bat conservation specialists, marine biologists at the Turtle Hospital in Fl, solid waste professionals discussing the designs of landfills and innovative new technologies to dispose of waste, and water resource engineers highlighting conservation practices. Our school hosts a Science Night which incorporates the traditional science fair with student projects and includes Environmental STEM professionals hosting information tables about their careers and conservation efforts. Presenters have included wildlife biologists, geologists, environmental engineers, entomologists, herpetologists and astronomy presenters.

5. Describe students' civic/community engagement projects integrating environment and sustainability topics:

Our 5th grade participated in a Project Based Learning project which dived into air quality. ACES partnered with Carolina Clean Air to real-time monitor air quality within our carpool lanes. Data collected along with research allowed students to create posters with tangible suggestions on how to improve air quality within their communities. Students focused on drivers reducing idling times. Projects were showcased at the adjacent Community Center to reach a larger audience. In conjunction with the air quality project, ACES is part of the EPA air quality flag program. Each day the corresponding air quality flag is hung at the school's entrance. Our school community annually hosts a Big Sweep Cleanup day within our watershed. Annually, 4th & 5th grade students participate in the Soil & Water Conservation Poster Contest. This year's topic was the importance of soil health, featuring BMPs and the seen/unseen soil food web. Posters were hung throughout school. 5th grade annually participates in the Shad in the Classroom program which has a waterways and shad conservation focus. Students learn about the Shad population, the conservation efforts being undertaken, and how positive/negative human impact has created the need for conservation. Students hatch 1,000 Shad eggs and release into the Neuse River.

6. Describe students' meaningful outdoor learning experiences at every grade level:

The Science Specialist utilizes the outdoor campus frequently with every grade level. Here are a few highlights from her class, all grades help maintain and observe the Monarch Waystation/Pollinator Garden. Students collect and raise Black Swallowtail & Monarch Butterflies, observe the life cycles, tag and release the Monarchs. 4th grade is responsible for recording, tagging & releasing while other grade levels are invited to the release. Kindergarten performs nest monitoring of the Bluebird boxes. 1st grade explores & observes animal habitats on school grounds,

while maintaining the Trail Camera which gives a unique look at wildlife on campus. 2nd grade monitors the Stratus rain gauge daily for CoCoRaHS data, learn where the water goes as part of the water cycle outside, and observes aquatic life cycles in the retention pond. 3rd grade learns how to use a dichotomous key, then takes their knowledge and key outside to find and identify spiders. 5th grade outside observes ecosystems in action consumers, producers, and decomposers and visits the Neuse River to release baby Shad that were hatched in the classroom. While there they rotate stations learning about the local ecosystem, meeting with a park ranger to learn more about Falls Lake Dam, and other environmental based activities.

7. Describe how outdoor learning is used to teach an array of subjects in contexts, engage the broader community, and develop civic skills:

All grades utilize our outdoor space within our Science Special. Art class utilizes the outside space to help visualize concepts such as "making a map of the school", and frequently uses the outside for students to pick objects to draw, focusing on natural materials in and around our Monarch Waystation/pollinator garden. PE classes utilize the outside track and field for health-related activities, such as learning how to pace, frisbee skills, and badminton. Primary classrooms frequently utilize the outside space for weather observations, ecosystem observations, understanding the functions of a plant, finding inspiration for a story or poem, and even math concepts, as they play activities teaching fractions and multiplication. The 5th grade air quality project, brought students a greater understanding of pollution, analyzing real data from our school, while educating the larger community through their presentations showcased at the community center. Our nest monitoring program helps the understanding and conservation of Bluebirds which are facing population decline due to habitat loss while connecting students and parents to nature.

8. Describe your partnerships to help your school and other schools achieve in the 3 Pillars. Include both the scope and impact of these partnerships:

ACES Book Drive to help Hallsboro Artesia Elementary School in the Columbus County School District. Hallsboro Artesia Elementary obtained significant damage from Hurricane Florence. Students were able to collect hundreds of books to replenish their library, while 3rd, 4th, 5th graders made handmade bookmarks and cards for the students of Hallsboro Artesia.
Our school PTA with the support of our families collected school supply donations to bring to Hurricane Florence impacted elementary schools in the eastern part of our state. Wake Co PTA helped organize.

See Spot Read- 2nd graders are given the opportunity to practice their reading skills to service dogs encouraging connection to animals and compassion while reinforcing literacy skills.

NCSU Turtle Rescue Team- Partnership to help rehabilitate wild turtles so that they can be released. ACES has helped rehabilitate and release over 15 turtles.

NC Museum of Natural Sciences- Shad in the classroom- provides opportunity, materials, educational resources to teach students about water quality, habitat loss, human impact, life cycles, by hatching and releasing American Shad fish.

NC Soil & Water Conservation- 5th grade students can be part of our School Envirothon team which learns in depth about Environmental Sciences and then competes against other middle school teams.

9. 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:

Our science specialist was able to collaborate with the NC State Entomologist to change WCPSS policy on releasing painted butterflies once emerged. In the past, according to policy they were required to dispose of the butterflies without release. With the approval of the State Entomologist, students are now allowed to release their butterflies fostering a greater connection to nature in 2nd grade. ACES partnered with nearby state, county and city nature parks to create a Nature Passport, students could take their passports to the parks and receive a stamp while learning and exploring nature. ACES has developed an Explorer Backpack program. Students can take home backpacks for the weekend to encourage nature exploration with their families, students are encouraged to blog about their adventures supporting authentic literacy through the ACES Kidblog site. ACES hosted a student/parent viewing of the documentary STRAWS and had a make and take reusable bag to encourage sustainability. We partner with NCSU Turtle Rescue Team to rehab injured turtles in our classrooms and then release. Our music teacher innovatively incorporates science curriculum into songs. 2nd grade has a performance where every song is weather related.