



Dr. John D. Barge, State School Superintendent
"Making Education Work for All Georgians"

Gwinnett County Public Schools making Earth more livable for future generations

Gwinnett County Public Schools (GCPS), located in the metro Atlanta area, is the largest school system in Georgia and currently serves over 165,000 students. As the 12th largest school district in the nation, GCPS is committed to our core mission of teaching and learning while encouraging environmental awareness and outstanding stewardship of our resources. By going "green" whenever possible and looking for innovative ways to be eco-friendly, GCPS has earned a reputation as a good steward of its resources and for developing responsible environmental practices in our students, staff, and communities.

With more than 23-million square feet of ENERGY STAR-certified areas, GCPS leads the nation for K–12 certified building space. These ENERGY STAR certified buildings use 35% less energy, generate 35% fewer greenhouse gas emissions and cost up to 40 cents less per square foot to operate than similar buildings across the nation. In addition, GCPS has completed several energy efficient upgrades of our facilities including: lighting retrofits in the classrooms, occupancy sensors, automated energy management systems, water source heat pumps, and variable frequency drives. Due to the efforts of GCPS to meet the highest standards in construction and operation, GCPS was recently recognized for its environmental stewardship and cost-effective practices by the United States Green Building Council - Georgia Chapter with the "2011 Leadership in Energy Efficiency Award".

The Environmental Protection Agency (EPA) considers GCPS a model for other school districts. Through participation in the EPA Waste Wise program, GCPS shares its best practices with

other school systems across the nation, including programs like the annual chemical pickup from school science labs, the use of “green” art supplies, and our Integrated Pest Management system.

GCPS is committed to reducing solid waste, supporting school-based recycling efforts, and reducing water use. Every school participates in paper recycling programs. In addition, elementary, middle and high schools are using compactors to replace dumpsters, which are reducing the cost and number of hauls to the landfill as compared to the five-day-a-week pickup schedule for dumpsters. To reduce water use within our buildings, all schools in GCPS are equipped with waterless urinals and toilets with low volume flush valves. Within buildings, porcelain tile floors eliminate the need for waxing, which results in saving water. To conserve water used for irrigation and maintenance of school grounds, GCPS practices xeriscape landscaping. GCPS also uses storm and ground water for irrigation purposes at high school athletic fields and does not irrigate any other areas of school grounds.

GCPS has partnered with the Clean Air Campaign for nine years and remains committed to improving air quality through a variety of programs. Fifty-two schools have implemented a *Clean Air School and No Idling* programs to address traffic and safety issues on our campuses. As the fourth largest student transporter in the U.S, the GCPS transportation department is truly driving environmental stewardship home. GCPS was the first school district in North America to buy Low Emission vehicle (LEV) diesel engines, and all vehicles over 1/2 ton use ultralow sulfur diesel fuel (clean diesel).

Last year, 84 Gwinnett County Public schools participated in the Green & Healthy (G&H) Schools program, which is a joint initiative of Gwinnett Clean and Beautiful and GCPS. These G&H schools plan, implement, and document their environmental efforts by completing an Environmental Profile at the end of the school year, which aligns with the curriculum and encourages good stewardship. Successful G&H school programs encourage faculty to collaborate and plan vertically to offer cross-curricular environmental lessons, which provide relevant learning opportunities for our students.

Environmental education is prominent in our essential Academic Knowledge and Skills (AKS) curriculum, which go beyond the standard state GPS requirements with regards to student knowledge and mastery. As our 2012 assessment results indicate, GCPS students are performing above the state average in Science across all grade levels on the Georgia Criterion-Referenced Competency Tests (CRCT), End of Course Tests (EOCTs), and Advanced Placement exams. To support environmental education, GCPS partners with Gwinnett Environmental & Heritage Center (GEHC) to offers hands-on learning opportunities. Approximately, 20,000 GCPS students participate in the indoor and outdoor environmental education programs at the GEHC each year.

2011-2012 GCPS Environmental Highlights

- GCPS leads the nation in K–12 ENERGY STAR certified building space (23 million sq. feet)
- Awarded the "2011 Leadership in Energy Efficiency Award" by the United States Green Building Council
- Awarded the 2012 USDA Best Practice Award for "Farm to School - Working with Local Producers"
- 84 schools, 49,729 students, and 2,864 teachers participate in the Green & Healthy School Program in 2011/12SY
- Over 700,000 lbs. of paper was recycled
- GCPS students are performing above the state average in Science across all grade levels on the CRCT, EOCT, and AP exams

Pillar I: Reduced Environmental Impact and Costs

One of every five Gwinnett County residents is a GCPS student. As the 12th largest school district in the nation, GCPS provides an environment focused on teaching and learning, while prioritizing environmental awareness and exceptional stewardship of our resources.

As of November 2012, 98% of GCPS eligible schools (over 23,000,000 square feet) are ENERGYSTAR certified, and we expect to reach 100% ENERGY STAR certified within a year as our energy audits are completed. With more than 23-million square feet of ENERGY STAR-certified areas, GCPS leads the nation for K–12 certified building space. These buildings that

have earned the EPA's ENERGY STAR certification use 35% less energy and generate 35% fewer greenhouse gas emissions than similar buildings across the nation. In addition, our top performing ENERGY STAR certified schools cost 40 cents per square foot less to operate than the average performer.

GCPS was recently recognized for environmental stewardship and cost-effective practices by the United States Green Building Council - Georgia Chapter with the 2011 Leadership in Energy Efficiency Award. GCPS was selected for the honor from among all Georgia's school districts thanks to the system's efforts to meet the highest standards in building and operating facilities that are resource-efficient for both water and energy use.

Energy-efficient building designs (for instance, minimizing exterior wall and roof areas) and energy management controls keep utility costs well below regional averages at a savings of \$13 million per year. The measures include occupancy sensors as part of GCPS' energy-efficient lighting systems, and locally available materials are used in construction to minimize transportation needs. Across the board, GCPS uses proven, long-lasting, low-maintenance materials, such as 4-ply built-up roof systems, concrete block walls, and brick, which decrease energy usage and building maintenance practices that may negatively impact the environment.

Over the last several years, GCPS has completed several cost-effective, energy-efficient upgrades our facilities including: lighting retrofits in the classrooms, occupancy sensors, automated energy management systems, water source heat pumps, and variable frequency drives. These upgrades have resulted in a reduction in the environmental impact of GCPS as well as the total costs of operation. Working in partnership with our utility providers, GCPS is in the process of conducting energy audits at all schools. These audits provide no-cost to low-cost recommendations, along with more sophisticated energy improvements to help the district reduce energy usage and expenses. The results of these on-going audits will determine the success of our current practices and help identify future efficiency upgrades to target.

In addition to equipment upgrades, GCPS encourages behavioral change in both our students and staff. Last year, 70% percent of our schools were involved in the Green & Healthy Schools program, which is a joint initiative of Gwinnett Clean & Beautiful GC&B and GCPS. The Green & Healthy Schools program began in 1999 with 20 schools. As of May 2012, 84 schools submitted documentation from administrators, teachers, and students as a part of the Green & Healthy Schools program. Collectively, 49,729 students and 2,864 teachers were directly involved in this program. Since 1999, the Green & Healthy Schools program has impacted more than 70% of GCPS through both education and practice. Students and teachers are engaged in a way that allows them to discover how to make an impact and then the power of every change we make. The end result is a more environmentally conscious community and a system of schools that encourages a lifelong attitude of environmental stewardship.

WATER: To reduce water use within our buildings, all schools in GCPS are equipped with waterless urinals and toilets with low volume flush valves. Within in our buildings, porcelain tile floors eliminate the need for waxing and subsequent need for stripping, which results in saving water. To conserve water used for irrigation and maintenance of school grounds, GCPS practices xeriscape landscaping. Additionally, GCPS uses storm and ground water for irrigation purposes at high school athletic fields, and we do not irrigate any other places on our school grounds. Some 3,000 acres in low-maintenance turf and low-water xeriscaping translates to \$1.4 million in reduced irrigation needs.

The limited irrigation and conservative landscaping practices help insure that minimal amounts of water are necessary to maintain landscaping and school grounds. We're green in site preparation, construction, and landscaping. Even before GCPS turns the first spade of soil, new school sites already are "green." A partnership with the Georgia Native Plant Society has resulted in more than 6,000 plants being saved from 25 building sites to date. The system also transplants trees and shrubs from building sites, saving the trees, as well as landscaping costs.

Not only does GCPS exhibit numerous water conservation practices, but GCPS actively reuses water throughout our facilities. Cooling tower water is treated and reused. Additionally, the vehicle wash (for cars/buses) uses recycled/reused water. This results in a significant

conservation of water. The recycling of water helps reduce the impact of necessary operational activities.

SOLID WASTE: GCPS embraces the 4 R's: Reduce, Reuse, Recycle, Rethink! Through collaboration and creative partnerships, GCPS has been able to significantly reduce solid waste production through the actions of our students, faculty, and staff in a way that has not distracted from the purpose of our schools. At the beginning of the school year, many of our schools have "teacher swaps" where supplies, books, resources are "traded" with other teachers within the school. This is particularly helpful for new teachers and for those changing subjects or grade levels. Additionally, the school year draws to an end, many schools have locker clean-outs during which all "usable" supplies are collected and sorted. The supplies are then made available for students at the start of the following school year. These supply reuse programs help conserve commonly used items including: notebooks, agendas, binders, calculators, pens, and pencils.

Every school participates in paper recycling programs offered from several different recycling vendors. Based on data submitted from only the 84 Green & Healthy Schools, over 700,000 lbs. of paper were recycled in 2012 alone. Each school implements its own school-based recycling program to help schools identify the best program for their school. Therefore, many different recycling options exist. Some schools offer year-round recycling of items, others schedule a "drive" for a particular item. Some items that are collected for recycling include aluminum cans, plastic bottles, cardboard, paper, athletic shoes, eye glasses, CD's/DVD's, electronics, cell phones, & ink cartridges. Elementary, middle and high schools are using compactors to replace dumpsters. Pressure gauges indicate when the self-contained units are ready for pick-up, reducing the cost and number of hauls to the landfill as compared to the five-day-a-week pickup schedule for dumpsters. (With fewer students, 16 elementary schools do not produce enough waste to make the practice cost-effective for that level.)

New for 2012, the Green & Healthy Schools Program Green & Healthy Schools Program, in partnership with GCPS, initiated phase one of an additional Pilot Recycling Program in six of our G&H Schools. The goal of the pilot program is to determine the true cost of school recycling and explore the feasibility of implementing a recycling program in all GCPS. Outdoor recycling

containers were placed at the pilot schools and internal reuse; recycling information was distributed to all teachers and student work areas and classrooms. This recycling program allows for an expanded collection program to include the following items: paper & cardboard, newspaper & inserts, notebook paper, office paper (including colored paper), sticky notes, construction paper, magazines, catalogs, phone books, file folders, index cards, envelopes, poster board, butcher/bulletin board paper, brown paper bags, non-carbon forms, milk/juice boxes, water bottles, soda bottles, sport drink bottles, juice bottles, milk bottles, café plastic bottles, soda cans, juice cans, & aluminum café cans. The goal of this program is identify an effective way to eliminate solid waste production at over 130 schools. To assess the effectiveness of each school's recycling program, a progress report is prepared for each school periodically which includes the following:

- School's Environmental Footprint
- Accomplishments
- Benchmarks
- Goals and Areas for Improvement.

In August 2012, Phase 2 of the Pilot Recycling program began in the same six schools. Phase 2 will conclude in June of 2013, at which time we will assess the feasibility of expanding this program to additional schools.

CHEMICALS: In order to maintain a safe school environment, the goal for GCPS is always appropriate and minimal chemical use. District policies and procedures provide guidance for employees with regards to chemical usage. GCPS encourages the use of green chemicals for all instructional purposes and has policies in place to eliminate hazardous chemicals from the classroom. District procedures require that curriculum related chemical products used in science, fine arts or technical education be approved by the applicable district curriculum office. Each of these offices will maintain a list of chemicals approved for use and the maximum amount of each that may be inventoried in each school. Any chemicals not on these lists require approval by the appropriate curriculum director or designee prior to purchase/use. This helps eliminate hazardous chemicals in the classroom environment and subsequently waste production. GCPS employees are required to follow all safe use instructions for any chemical product that is used in a GCPS

facility. Additionally, proper disposal and documentation of all hazardous materials e.g. photo chemicals, art supplies, oil, anti-freeze, fluorescent lamps, batteries, paints, solvents, medical waste, etc. are to be conducted as described in GCPS procedures.

To support schools in proper disposal, GCPS Environmental Services conducts annual hazardous waste removal/disposal at each school, which helps insure that chemicals are disposed of properly. Additionally, GCPS employees are prohibited from bringing chemical products into a GCPS facility for the purpose of cleaning, air freshening, or other non-curriculum related uses. This includes but is not limited to household cleaners, commercial cleaners, air fresheners, etc.

TRANSPORTATION: GCPS has been a Clean Air Campaign partner for nine years and remains committed to implementing smog-reducing practices. Clean Air Campaign's, Clean Air Schools programs are available to all Georgia schools, provide measurable results, and include programs to promote bus ridership, carpooling to school and no idling in the school zone. GCPS has been promoting commute alternatives for all staff, including carpooling and mass transit, for several years. The GCPS transportation department is truly leading the way with regards to responsible stewardship of our resources.

GCPS was the first school district in North America to buy LEV diesel engines, with about two-thirds (1,100 units) of today's fleet using the emissions-reducing engines, and all vehicles over 1/2 ton are diesel. Furthermore, all vehicles use ultralow sulfur diesel fuel (clean diesel). Currently, there is a project underway to install diesel oxidation catalyst mufflers on 837 buses. This project is funded by Congestion Mitigation Air Quality (CMAQ) grant from GA DOT through GA EPD. In addition, GCPS bus managers are required to have a Commercial Driver's License and undergo a comprehensive training program of driving skills, student management, classroom schooling, CPR and First Aid. All bus managers are required to participate in monthly in-service meetings, attend a safety workshop each year, and pass our Annual Driver Proficiency Test (ADPT). Our bus managers are well-trained and dedicated professionals whose primary responsibility is to transport students safely. It should therefore come as no surprise that the Pupil Transportation Safety Institute (PTSI) deemed GCPS' Transportation Department one of the five best in the country.

With more than 1,500 buses and another 400 vehicles, regular maintenance means a lot of old oil filters. A filter crusher drains 95% of excess oil and sludge from filter elements, leaving only non-hazardous waste and crushing the filter to just a quarter or less of its original size. Recycled tires are chipped into pellets for use as alternate paving material in lots and driveways. GCPS also recycles vehicle batteries. Efficient routing for both buses and delivery trucks cuts down on waste, and idling is kept to a minimum. Bus lots are geographically located around the county, reducing drive time and mileage.

A full bus is exponentially more efficient than individual cars. GCPS encourages all students to ride the bus to school, and more than three-quarters of Gwinnett students take the bus, thanks in part to continued efforts to promote bus ridership. GCPS is the fourth largest student transporter in the U.S. Through a partnership with The Clean Air Campaign, 52 GCPSs implemented Clean Air Schools programs to make a positive impact on air quality at their schools and address practical traffic and safety issues. Committed teachers, parents and administrators lead classes and student groups, such as green clubs, to make their schools healthier and safer places. Additionally, 52 GCPSs participated as No Idling schools. This program encourages parent drivers and school bus drivers to turn off their engines when dropping off or waiting for students, thus decreasing harmful emissions and creating a healthier school environment. In-ground signage and educational materials are presented to all parents at the beginning of each school year.

At the beginning of this program in 2007, 60% of vehicles waiting in the “car rider line” at the end of the school day were idling. Within a year of implementing this program, pilot schools saw a reduction in idling down to less than 5% of vehicles idling. Five years later the program has grown from 2 to 52 schools with even more schools expected to get involved next year. Other Clean Air Schools programs offered to our schools to promote the use of alternative transportation include: *Pool to School and Ride the Bus for Clean Air*, both of which provide schools with the tools to organize and promote carpooling to school and to encourage more students to ride the bus to school. Both programs aim to reduce traffic, increase carpool efficiency, and reduce pollution.

Recently, one of our schools, White Oak Elementary, produced a video featured by The Clean Air Campaign advocating for a Pool to School approach that engaged students, parents, and teachers in the program. This is just one example of how these programs provide students with opportunities to apply their learning in an impactful way.

Teachers in Clean Air Schools also are provided with air quality lesson plans for all grade levels, as well as informational materials that address air quality, air pollution, and transportation solutions. High School students have the opportunity to participate in the *Get There Green* program, which allows students to create, organize, and implement their own customized clean commute event.

Pillar II: Improved Health and Wellness

GCPS reinforces a culture of environmental stewardship through its building program and operational practices. GCPS is doing its part to make this little corner of the Earth more livable for our children and, one day, for their children... a greener Gwinnett where we can all breathe a little easier and enjoy a cleaner, healthier community.

GCPS is a leader in environmentally friendly operational practices, recognized with local, state, and even national awards, but the rewards don't stop there. By going "green" whenever possible and looking for innovative ways to be eco-friendly, GCPS has earned a reputation as a good steward of both its financial and environmental resources, with savings for taxpayers and a more livable community for its citizens. When it comes to central maintenance and operations, even small measures applied across a big organization can have an impact in efficiency, reduce environmental impact, and put some "green" to the bottom line. Here are some green highlights from among operational practices of the GCPS' Facilities and Operations (F&O) Division.

We are green in central maintenance and operations. GCPS employs decentralized maintenance shops, placed strategically around the county; operating closer to the schools they serve and reducing mileage and response time. GCPS procedures ensure that vehicles are refueled in the cool of the day to reduce vapors. Electric, not gas-powered, tools are in use, and crews avoid

mowing and painting on smog-alert days. GCPS painters use hand rollers or brushes instead of paint sprayers.

GCPS has a comprehensive integrated pest management (IPM) that is people and environment friendly and very effective. The IPM program uses current, comprehensive information on the life cycles of pests and their interaction with the environment. The GCPS IPM uses in-house pest control technicians, who are continually trained in the best practices. This information, in combination with available pest control methods, is used to manage pests by the most economical means with the least possible hazard to people, property, and the environment.

To maintain and promote superior air quality, the GCPS energy management system continuously monitors humidity and CO2 levels. All buildings are ventilated to meet ASHRAE standards. Superior air quality is achieved by ionization units in the HVAC units. To encourage optimal performance, preventive maintenance on all HVAC equipment is scheduled and tracked via a computerized maintenance management system. Additionally, HVAC air filters are on a routine schedule for replacement. Moisture is removed through a desiccant/mechanical process along with a dehumidification control sequence as necessary. The water quality in all cooling towers is tested/monitored monthly to promote optimal performance. All of these features help support an environment focused on the health of all the stakeholders.

GCPS' 830 custodians use green practices learned in GCPS' Custodial Academy. Backpack vacuums are green-seal certified. A cleaning chemical dispensing system meters usage for proper dilution. Most chemical used in GCPS' custodial program have low- to zero-hazard ratings. Those projects that use more caustic chemicals are left for summer when fewer staff and students are in the buildings. The school system is currently testing "green" cleaning supplies for future use. All custodial chemicals are specified by GCPS and purchased through the GCPS warehouse, which insures that all chemicals are keeping with district policies and procedures.

In keeping with the culture of wellness, each school has an environmental liaison that coordinates environmental education and local school projects. In addition, this environmental liaison is responsible for completing the school's Environmental Profile. Profiles are used to

determine winners of the annual Environmental Achievement Awards, which recognize a school's environmental efforts in seven key areas. The Environmental Protection Agency (EPA) considers GCPS a model for others. Through participation in the EPA Waste Wise program, GCPS shares its best practices with other school systems, including programs like the annual chemical pickup from school science labs, the use of "green" art supplies, and Gwinnett's Integrated Pest Management system. To encourage and celebrate the environment outside our schools, many schools within GCPS have their own school gardens some with produce, some with herbs, some with wildflowers, and some a combination. These gardens are utilized for outdoor learning opportunities at every grade level and all subject areas. For example, Puckett's Mill Elementary's cafeteria staff has a "café garden" for students/classes to visit. The cafeteria workers often read to students in the café garden. Additionally, another school, Arcado Elementary, has an extensive outdoor garden area which is used frequently for instruction. Certainly more the norm than the exception, outdoor classrooms are found at most schools within GCPS.

The GCPS School Nutrition Program participates in the national Farm to School program, which helps to provide healthy and nutritious food to school children while also providing local farmers with consistent and dependable outlets for their products. All students are given a chance to experience locally grown fresh and nutritious produce. In Fall 2012, school systems across the nation will be required to meet tough new federal nutrition guidelines for school meals, ensuring that meals offered are healthy, well-balanced and provide students the nutrition they need to grow and develop. Fortunately, Gwinnett County had already successfully implemented many of the new meal requirements as part of their program. GCPS school meals offer students low fat and fat free milk options, fresh fruits and vegetables, lean proteins and whole grains that are kid-friendly and nutritionally sound. In recognition of their commitment to their high standards of nutrition, the GCPS School Nutrition Program has received the following awards over the last three years:

- 2010 Georgia Best Practice Award for "Promoting a Healthy School Environment"
- 2010 Georgia Best Practice Award for "Increasing Participation in School Lunch"
- 2011 Georgia Best Practice Award for "Working with Local Producers"
- 2012 USDA Best Practice Award for "'Farm to School - Working with Local Producers"

Pillar III: Environmental and Sustainability Education

Gwinnett County Public Schools, has a comprehensive, integrated environmental education program that extends beyond the essential Georgia Performance Standards (GPS). The GCPS Academic Knowledge and Skills (AKS) incorporate environmental education at every grade level K-12 and is aligned to the Common Core. Environmental education is prominent in our curriculum, and the Gwinnett AKS goes beyond the standard state GPS requirements with regards to student knowledge and mastery. When these standards are combined with exceptional instruction, the results have been exceptional.

GCPS's rigorous academic curriculum allows for inquiry based learning and also includes the use of models, investigation, and data analysis. To help support the environmental content in grades K-5, GCPS employs more than 50 elementary science specialists that provide in-depth exposure and inquiry experiences for every elementary student in their building. This helps provide a deep STEM foundation that students can build upon in their secondary years.

Additionally, most of our schools have outdoor classrooms that bring the environment to the students in a new and profound way. The more rigorous standards and quality instruction in environmental science have helped our district outperform the state and metro-Atlanta average on all state assessments for the last five years.

As our 2012 assessment results indicate, GCPS students are performing above the state average in Science across all grade levels on the Georgia Criterion-Referenced Competency Tests (CRCT) and End of Course Tests (EOCTs). Since there are elements of environmental science across the curriculum, we know that they are also demonstrating mastery of the environmental science content as well. In addition to the environmental science embedded in the K-12 AKS, GCPS students also perform well in AP Environmental Science. Over the last several years, GCPS has expanded its offerings in AP Environmental Science while maintaining high levels of student achievement. In 2008, 140 GCPS students took the AP Environmental Science exam and the average was below the global average. In 2012, 725 GCPS students (6% of our 2012 graduates) took the AP Environmental Science test, and the percentage of students was slightly

above the global average. This represents an increase of over 400% in participation while increasing student performance over those same four years.

Needless to say, the GCPS results in 2012 are significantly above the average for the entire state of Georgia with the average score of 2.71 and 2.56, respectively. This is even more impressive when one considers that GCPS makes up 15% of the 4,795 students in Georgia that also took the exam. When the GCPS scores on the AP Environmental Science exam are removed from the State of Georgia average, the state average drops 0.03 points to 2.53.

GCPS offers year-round staff development opportunities that emphasize the AKS and the most effective strategies for teaching the curriculum. Among these offerings are several professional development opportunities in environmental and sustainability education which are available to all teachers. GCPS hosts quarterly training sessions for AP environmental Science teachers. Additionally training is continuously provided by some of our environmental partners. These include training sessions held at the Georgia Aquarium, Skidway Island, the postsecondary institutions in the area, and Gwinnett Environmental and Heritage Center. The Gwinnett Environmental & Heritage Center (GEHC) offers extensive hands-on and engaging learning opportunities for both professionals and students. As a partner with GCPS, GEHC is devoted to allowing teachers and students to explore water, natural resource conservation, and sustainability. Through a series of indoor and outdoor lessons, teachers are able to learn how water has been used over time and how it has shaped our way of life.

However, GEHC provides more than professional development. Our partnership with GEHC dramatically impacts environmental science education in GCPS. Approximately, 20,000 GCPS students participate in the indoor and outdoor environmental education programs at the GEHC each year.

ENVIRONMENTAL STEM OPPORTUNITIES

GCPS engages students in numerous opportunities that challenge students to apply their STEM to address environmental and sustainability issues within the context of both the curriculum and extracurricular activities. The GCPS curriculum encourages environmental literacy and critical

thinking at all grade levels in all content areas. A uniquely GCPS, cross-curricular example of this is the high school Gateway writing assessment, which is required of all GCPS students. This assessment, which has several environmental topics in the rotation, requires students to analyze information and communicate via writing their understanding of the situation and propose a potential solution. This assessment has been a longstanding cornerstone in our district and is a matriculation requirement. The Science Gateway exam helps insure that our graduates are prepared for the jobs in our community and equipped with the critical thinking and communication skills to be college and career ready.

Another example of environmental education via STEM is the annual GCPS Focus on Leadership and Advancement in Renewable Energy (FLARE) competition for K-12 students. For the last three years, the GCPS Technical Education and Science Offices have hosted our own annual solar energy and engineering competition. FLARE was created in 2010 to teach collaborative, problem-solving in the STEM field as related to environmental education. Each year more than 100 teams from approximately 40 schools compete to determine the best and brightest alternative energy engineering team in GCPS. FLARE is one of several district opportunities that aligns the AKS with authentic experiences applying key concepts in Science, Technology, Engineering, and Math (STEM). As one of several co-curricular activities that expose students to integrated and applicable information across these content areas, this annual competition demonstrates that STEM content extends beyond the classroom. Students work in collaborative teams within the confines of the design rules to accomplish a goal. Unlike many projects, however, these engineering tasks require students to develop and test their design multiple times before the competition. This design process is fundamental to engineering, and FLARE provides students from elementary school to high school the opportunity to explore and engage in the design process in a relevant way.

Elementary school students compete in the solar cooking event using ovens they engineered at their local school. Students have approximately 3 hours to prepare and cook anything they would like to. The ovens are judged based upon creativity and engineering design, and the food that is prepared is judged for both taste and presentation.

Middle School and High School teams have the opportunity to test their engineering skills in the solar powered Sprint car competitions. There is a design competition and a pure racing competition, in which the fastest car wins. The design competition is focused on the innovation and attention to detail with regards to the design process and physics and engineering behind the design. In the racing component, time trials are used to determine seeding, which is followed with head-to-head elimination racing.

In addition to FLARE, another example of the nexus between STEM and environmental education is the Gwinnett Regional Science and Engineering Fair, which is in its 35th year. In 2012, GCPS celebrated the fair's 34th anniversary by adding elementary-level science-researched projects to compete alongside the middle school and high school students. Out of the more than 600 GCPS projects in this year's regional fair, more than 100 of those were completed by elementary students. The 2012 Fair featured the work of 899 students from 44 GCPS schools, 2 private schools, and local home school students. During the fair, our students get to hear from Science and Engineering professionals during topical breakout sessions. Three guest speakers in the environmental field speak with students about green technology & engineering trends, as well as career opportunities during both of the above events. Approximately, 21% of those projects dealt with an aspect of environmental science. Furthermore, a total of 55 student-researched projects from 17 different Gwinnett middle and high schools were awarded a first place award and were selected to represent the county at the Georgia Science and Engineering Fair in Athens, Georgia, which is the largest contingent of students at the state fair.

Finally, in an effort to provide high school students with community/business experiences, junior and senior students from GCPS' School of Mathematics, Science, and Technology serve as interns for businesses throughout the county, including the environmental nonprofit agency, Gwinnett Clean & Beautiful.

CIVIC ENGAGEMENT

GCPS partners with our local Keep America Beautiful affiliate, Gwinnett Clean & Beautiful, to offer the Green & Healthy Schools Program. This program is a system of strategic planning, teaching, learning and doing that results in a greener and healthier natural world. Program

components are in alignment to Common Core Standards & also support national STEM education efforts. Successful G&H school programs allow for faculty to collaborate and plan vertically to offer cross-curricular environmental education. Teacher liaisons from each school utilize The Green & Healthy Achievement Profile (G-HAP) as a roadmap/action plan to guide in the planning, executing, and assessing the effectiveness of environmental lessons, activities, standards, and school programs.

The Profile assesses 7 “earth-friendly” pathways:

- Waste Reduction & Recycling
- Education and Stewardship
- Water Conservation and Watershed Protection
- Air Quality
- Energy Conservation
- Beautification and Greenspace Preservation
- Community Impact

Schools voluntarily document various educational components, activities, and special events conducted throughout the school year as they relate to environmental education and action. Examples of such documentation can include: data collection; school newsletter articles; newspaper articles; staff development agendas; teacher lesson plans; pictures; ceremony program; project calendar; field trips to landfill; recycling centers; or water plants; utilizing environmental science tool kits; school maps with identified outdoor learning areas, etc.

Schools also establish long-range sustainability plans as part of their G&H Schools program goals. At the close of each school year, teacher, liaisons and administrators submit a completed “Profile” to Gwinnett Clean & Beautiful’s Green & Healthy Schools Program Coordinator. After submission of the profile, a numerical score is earned for documentation of above mentioned components. Based on numerical scores, schools advance through four levels of recognition; Discovering, Progressing, Taking Action, & Reaching Higher. Schools are recognized by GC&B and GCPS at the fall Principals/Leadership meeting. Schools that have sustained their efforts for 5 consecutive years receive the “Sustaining Excellence in

Environmental Education” award and are recognized by the Board of Education. This program began in 1999 with 20 schools. As of May, 2012, 84 schools submitted documentation as a Green & Healthy School. Collectively, 49,729 students and 2,864 teachers were directly involved in this program. More than 70% of Gwinnett County Public Schools participated. The end result is an environmentally literate school community, and the fostering of lifelong attitudes toward protection of our environment.

The 2012 partners in the Green & Healthy program include:

- Gwinnett County Board of Education
- LEED certified-Gwinnett Environmental & Heritage Center (which offers environmental field trips for students, and staff development opportunities for teachers.)
- The Clean Air Campaign
- Gwinnett Dept. of Water Resources
- Georgia Gwinnett College
- Georgia Power
- Keep America Beautiful
- Keep Georgia Beautiful and 84 schools.

The 84 G&H Schools in GCPS documented a variety of outdoor learning programs. Such programs included: Litter-free school events, outdoor gardening with included drought-tolerant plants and utilizing rain barrels to help conserve water for irrigation of the gardens. Many of our schools have designed outdoor classrooms complete with pollinator gardens, composting bins, bogs, ponds, and Adopt-A-Stream monitoring of campus or nearby ponds, streams, and wetlands. Outdoor learning areas were funded by grants, school business partners, & community contributions. Teachers conducted lesson activities in the outdoor learning areas. Teachers even conducted scavenger hunts, writing activities, and math lessons outdoors.

School principals are asked to appoint a designated environmental teacher(s) liaison that serves as the “link” to their school and the G&H Schools program. These liaisons are referred to as the Teacher Advisory Board. The liaisons are responsible for educating their school community (teachers, administrators, students, support staff, parents/PTA) throughout the school year regarding education and environmental engagement. Twice a year, all district teacher and parent

liaisons participate in G&H Schools training. Training objectives include: *learning creative ways to apply STEM concepts,*discussing how the new science standards connect to environmental learning objectives, learning best practices from successful G&H Schools, and participating in lessons/activities that address environmental topics from the seven pathways assessed in the G&H Schools Profile.

Ten teachers from the Teacher Advisory Board serve in a leadership role and comprise the Green & Healthy Schools Steering Committee. This committee earns staff development credits for assisting with the development of environmental lesson plans and for helping to organize the teacher lessons/activities for the G&H Schools trainings.

GCPS students and teachers have many opportunities to engage in community engagement events. Not only do our students gain leadership skills, they also earn service learning hours. Most schools utilize their school service clubs, green clubs, or volunteer centers to recruit volunteers. Below are several examples of community engagement events conducted in 2012 that included our students and school staff:

Adopt-A-Road: 14 Gwinnett Public Schools have adopted sections of county roads. Student and staff volunteers cleaned up 1-mile sections of roadway for a minimum of four times a year.

Great Days of Service: Several Gwinnett County Public Schools participated in community-based clean up events in the annual district-wide day of service.

G&H School Mentoring: Successful G&H Schools often mentor new G&H Schools. Teachers and students from both schools plan and work events together. Two examples:

1. Maxwell High School teachers and students mentored Radloff Middle School as they began their process of becoming a G&H School. Maxwell High School also partnered with Grayson Elementary to help students design an outdoor garden area.
2. Brookwood High School partnered with Five Forks Middle School to collect and recycle old CD's, DVD's, and VHS tapes. A local artist was happy to accept the collected items.

District Policies

GCPS's district policies and procedures provide a framework that maintains safe, effective, and responsible environments for our students and staff. In support of these policies, the GCPS Strategic Priorities for 2010-2020 have been instrumental in promoting many of the environmental achievements documented in this application. The Strategic Priorities for 2010-2020 reflect GCPS ongoing commitment to excellence, instructionally and operationally. They outline the qualities and characteristics that stakeholders believe are desirable for 10 major components of the school district. We believe that pursuing these attributes will move us closer to our vision of being a system of world-class schools.

Strategic Priorities for Facilities and Operations: "The school system will look beyond today's classroom to provide learning environments for tomorrow's students, including alternative, non-traditional, and specialized academic programs. Schools will be designed, organized, and managed to allow the flexibility needed to serve students best. Our facilities will have the infrastructure and technological resources to advance teaching and learning. We will employ best practices in operations management, ensuring that buildings, grounds, and athletic facilities are safe, secure, attractive, energy-efficient, and well-maintained. Additionally, the school system will provide safe, reliable, efficient, and cost-effective transportation services. Using state-of-the-art design and construction techniques, innovative operational strategies, and conservation principles, we will continually improve our facilities and operations."

With regards to the accomplishments described in this application, here are a few examples of specific district policies which promote and encourage environmental awareness and sustainability.

Chemical and Hazardous Waste: District procedures require that curriculum related chemical products used in science, fine arts or technical education be approved by the applicable district curriculum office. Each of these offices will maintain a list of chemicals approved for use and the maximum amount of each that may be inventoried in each school. Any chemicals not on these lists require approval by the appropriate curriculum director or designee prior to purchase/use. This helps eliminate hazardous chemicals in the classroom environment and

subsequently waste production. Pesticides shall not be brought into the system per GCPS Procedure. Biohazardous and medical waste from school clinics will be handled in accordance with GCPS. A copy of a Material Safety Data Sheet (MSDS) for any GCPS authorized chemical product, whether curriculum or non-curriculum based, must be accessible on-site for easy reference. GCPS employees are required to follow all safe use instructions for any chemical product that is used in a GCPS facility. Additionally, proper disposal and documentation of all hazardous materials e.g. photo chemicals, art supplies, oil, anti-freeze, fluorescent lamps, batteries, paints, solvents, medical waste, etc. are to be conducted as described in GCPS procedures. To support schools in proper disposal, GCPS Environmental Services conducts annual hazardous waste removal/disposal at each school, which helps insure that chemicals are disposed of properly. GCPS employees are prohibited from bringing chemical products into a GCPS facility for the purpose of cleaning, air freshening, or other non-curriculum related uses. This includes, but is not limited to, household cleaners, commercial cleaners, air fresheners, etc.

Pest Control: In order to provide the most effective, efficient and economical pest control service, and to reduce the potential risk of pesticide use in our facilities, the GCPS will utilize the Integrated Pest Management (IPM) concept of pest control. Pesticides will not be used indiscriminately. When controlling pest populations, all reasonable control methods, both chemical and non-chemical, must be considered and used as appropriate to achieve the above objectives. In compliance with the principles of IPM: Pesticides will not be used if the pest problem can be effectively and economically controlled through non-chemical means. When pesticides are deemed necessary and appropriate:

1. The least toxic and least amount of chemical that will effectively control the pest will be used.
2. Use low or non-volatile materials, such as baits, and apply in protected locations, such as cracks and small voids, when appropriate and effective.

3. When feasible, pesticide shall be applied when occupants (students, staff and other employees) are not present, such as afternoons when school is out, during school holidays, etc., to reduce the potential for pesticide/people contact.

Property Disposal: When property owned by GCPS is no longer of economically sound use for meeting a system need, then it shall be disposed of by the most cost effective of the following six methods:

- I. Property shall be sold to the highest bidder via a competitive bid process, spot bid sale, or auction. This may include electronic or virtual auction methods. Such events shall be advertised in appropriate media, sufficiently in advance of the sale date to provide a competitive environment for maximizing system revenues. School district employees empowered with the responsibility of declaring items surplus shall be excluded from bidding only on the items they have declared as surplus.
- II. Property shall be sold in an "over the counter" manner to the public at any time based on prices established by the Assistant Director of Environmental & Supply Services and approved by the Director of Environmental & Supply Services. The prices charged will be based on prices received in the most recent spot bid or auction sale of a like item.
- III. Property shall be transferred at no charge to an agency of the Gwinnett County Government in response to a written request. Gwinnett County Government will affirm in writing its agreement to accept the transferred property and will be responsible for retrieving the property from Gwinnett County Public Schools.
- IV. Property shall be transferred at no charge to a non-profit organization in response to a written request. The non-profit organization will affirm in writing its agreement to accept the transferred property and will be responsible for retrieving the property from GCPS.

V. After six months or a spot bid sale or auction, surplus items not claimed or purchased will be disposed of in a manner determined by the Assistant Director of Environmental & Supply Services.

VI. Unserviceable/Unusable Surplus Property -- These items may be disposed of in the best interest of the School System as approved by the Assistant Director of Environmental & Supply Services. Items that can be recycled in a cost effective manner shall be.

School Nutrition: Students' cognitive, behavioral, and physical performance is improved by good nutrition. In order to contribute to a coordinated learning environment in which students can reach their full academic potential, each elementary, middle, and high school will provide a lunch and breakfast program that serves high quality, nutritious meals to students in accordance with regulations as determined by the United States Department of Agriculture, the State Department of Education and the Local Board of Education.

Comprehensive School Health and P.E. Program Plan: The Board recognizes that a proactive, preventive and comprehensive health and physical education program is essential for student success. The Superintendent shall designate staff to collaborate with parents and the community to provide a health and physical education program that emphasizes direct instruction that meets state and local standards and a healthy and safe learning environment. This program shall include information and concepts in the following areas:

- I. Alcohol and other drug use
- II. Disease prevention
- III. Environmental health
- IV. Nutrition
- V. Personal health
- VI. Sex education / AIDS education
- VII. Safety
- VIII. Mental health
- IX. Growth and development

- X. Consumer health
- XI. Community health
- XII. Health concerns
- XIII. Family living
- XIV. Motor skills
- XV. Physical fitness
- XVI. Lifetime sports
- XVII. Outdoor education

U.S. Department of Education Green Ribbon Schools 2013 – District Award

Name of Superintendent* Mr. J. Alvin Wilbanks
(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

District Name*: Gwinnett County Public Schools Tel. (678) 301-7036

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

J. Alvin Wilbanks Date 2/13/13
(Superintendent's Signature)

PART II – SUMMARY OF ACHIEVEMENTS

Instructions to District Superintendent

Provide a concise and coherent "snapshot" that describes how your district is representative of your jurisdiction's highest achieving green school efforts in approximately 800 words. Summarize your strengths and accomplishments. Focus on what makes your district worthy of the U.S. Department of Education Green Ribbon School District Award.

PART III – DOCUMENTATION OF STATE EVALUATION OF DISTRICT NOMINEE

Instructions to Nominating Authority

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

Nominating Authority's Certifications

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

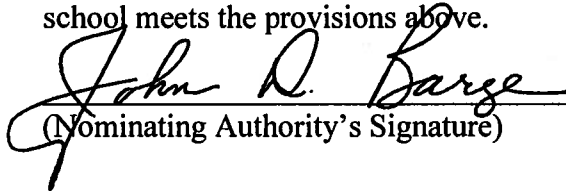
1. The district is one of those overseen by the Nominating Authority which is highest achieving in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental and sustainability education.



Name of Nominating Agency Georgia Department of Education

Name of Nominating Authority Dr. John D. Barge
(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

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

A handwritten signature in black ink that reads "John D. Barge".

Date February 12, 2013

(Nominating Authority's Signature)

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

OMB Control Number: 1860-0509
Expiration Date: February 28, 2015

Public Burden Statement

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