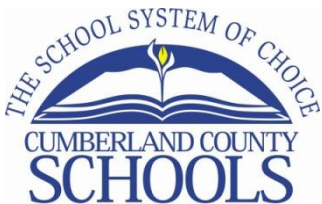




Go **Green** Initiative
We're a school system of choice
and our choice is green

Cumberland County Schools Sustainability Report 2016



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Cumberland County Schools Sustainability Report 2016

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SUPERINTENDENT

TIM KINLAW
ASSOCIATE SUPERINTENDENT AUXILIARY SERVICES

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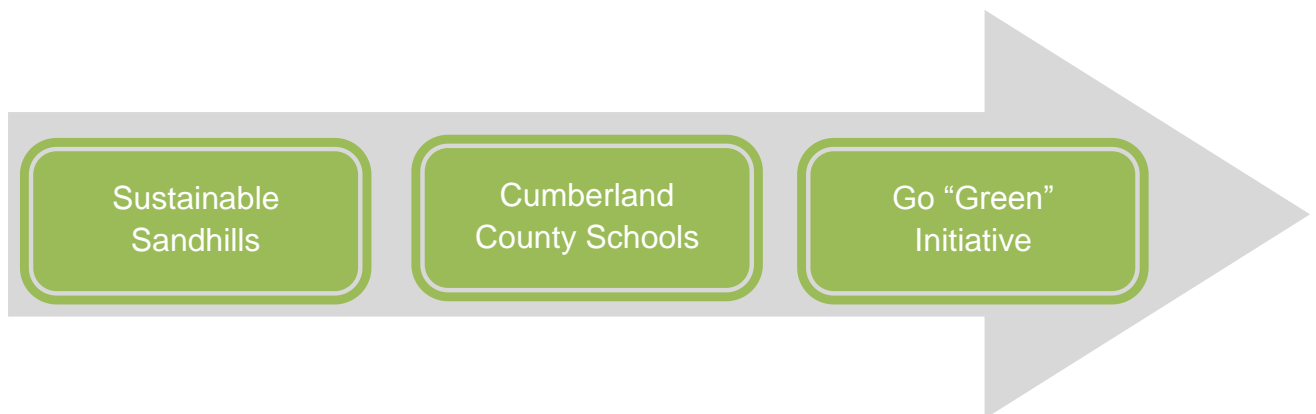
Updated January 2017: This report was developed by the Go Green Initiative staff at CCS in conjunction with Sustainable Sandhills as an annual summary of sustainable practices in CCS daily operation. Copies of this report are available on the CCS website

<http://www.operations.ccs.k12.nc.us/> or <http://gogreen.ccs.k12.nc.us/>

Cover Art By: Hannah Snyder, Jack Britt High School

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LETTER FROM THE SUPERINTENDENT

Greetings from Cumberland County Schools!

Cumberland County Schools strives to meet the operational needs of our schools by being proactive. In 2009, we formalized our partnership with Sustainable Sandhills creating our Go Green Initiative. In this program, we change how we think about sustainability. Strategies were developed to increase recycling and to reduce energy use, water consumption, and solid waste. By being more sustainable, our children experience a healthy environment where they can learn.

As you read through our report, you will see the principles of our Go Green Initiative being met. Much of what we do occurs through partnerships; within our schools, between our schools, and with environmental educators in our community. We recognize the importance of utilizing all resources in this tight fiscal time. Energy and water use have been reduced and efficiency improved. We are converting older fluorescent lighting (T12) to more efficient lighting such as T8 or LED lighting. Low-flow timed faucets are being installed. Water temperatures are being monitored to reduce energy use from excess heating. Opportunities for awareness and education have expanded. We sponsor an exemplary Earth Day Celebration which is a part of the North Carolina Science Festival. Environmental professional development is offered to our teachers. Recycling has increased thus reducing the amount of solid waste. Improved recycling programs within our schools are responsible for this reduction. Composting our organic waste is being explored to further reduce the materials going into the landfill.

We evaluate our program and develop new strategies to move forward. The Initiative evolves as we strive to meet the needs of our schools. As schools learn new strategies and become more sustainable, they also expand their programs. The expansion is through recertification. When schools recertify, this process requires schools to evaluate their Go Green program.

The Go Green Initiative includes many members of our Auxiliary Services from our skilled crafts, general services, custodial and child nutrition services. All contribute to help decrease our carbon footprint in Cumberland County. Discussion, collaboration, planning, strategizing and implementing are all part of being partners in reducing our energy use, conserving and preserving our water, decreasing pollution, reducing our waste and repurposing as much of our materials as possible. Making Cumberland County Schools a healthy and green place for our children to learn is our primary job.

You, our community, are also important to help us maintain the high level of sustainability as we change the wasteful habits of the past. Your commitment is important! Partner with us by embracing these new ideas and sustainable habits. You will be supporting our shared goals of becoming a more sustainable community. GO GREEN!

Thanks,

*Dr. Frank Till
Superintendent,
Cumberland County Schools*

LETTER FROM THE GO GREEN INITIATIVE STAFF & PLANNING SUPERVISOR

The terms efficiency and conservation are often used interchangeably in today's forward-thinking society. They do, however, have subtle differences which are key to understanding the methods presented in this report. Efficiency generally refers to technological changes such as upgrading to L.E.D. Lighting or high efficiency water faucets. Conservation on the other hand reflects behavioral changes such as turning off equipment when not in use or switching off the lights.

When Cumberland County Schools adopted the Go Green Initiative back in 2009, we were entering an era of uncertain energy stability, soaring fuel costs, and aging physical infrastructure and equipment. By reaching out to our community partners and planning for the long-term, we have since reduced energy consumption expenditures from pre-2009 levels. It has become evident that responsible facility energy management and diligent resource conservation are the keys to an efficient operation. To be successful, it takes everyone's cooperation.

With this understanding and support, the Cumberland County Board of Education adopted a system-wide resource conservation policy. Policy 6530/6530-R specifically charges all Cumberland County School personnel, including school board members, administrators, classified and certified staff, volunteers and students with the responsibility of understanding their impact as energy savers, conservationists and consumers.

Over the 2015-2016 school year CCS's commitment to this tax-dollar saving task has undoubtedly reached new heights. In addition to the conservation efforts highlighted in past reports, there has been a strong focus on efficiency. Methods for the measurement and analysis of electricity, fossil based fuels, and water usage were significantly redefined to reflect for accurate data. Benchmarking practices and performance indicators were put in place to identify opportunities for operational and efficiency improvements. In addition, we hired a full-time Energy Operations Auditor to verify quality assurance and control throughout the ongoing process.

As we better understand the avenues for saving and conserving our financial resources, CCS looks forward to investing in efficient and sustainable systems that improve environmental conditions and reduce utility usage well into the future. Already, powerful financial tools and funding sources are being explored to maximize the amount of improvements that can be accomplished during a fiscal year.

Together we can protect and nurture all of natural resources, including our most precious resource; our children.

Sincerely,

*H. Mark Whitley
Go Green Initiative and Planning Supervisor
Cumberland County Schools*

LETTER FROM SUSTAINABLE SANDHILLS

*"...You don't have to be perfect, you just have to be brave."
-Clara, 8 years old*

Cumberland County has been a leader in providing STEM and 21st Century educational opportunities since before the 2009 inception of the The Go Green Initiative (GGI), a grassroots program that teaches students personal responsibility for the Earth and helps schools evaluate every aspect of their environmental impact.

The Go Green Initiative provides opportunities for that science and environmental education to take root from the ordinary to the extraordinary, from the solar panels on Douglas Byrd High School to the Carbon Tree Bank planted outside Sunnyside Elementary School.

Sustainable Sandhills is honored to be the community partner for the visionary Cumberland County Schools. We work hard to fulfil the Board of Education's sustainability policy priorities knowing that our students, our schools, our whole world benefits from this education and proactive energy conservation.

The Certified Green School program requires a commitment to meeting the qualifications on an environmental checklist that heavily emphasizes reducing waste, conserving energy, educating on recycling, and promoting clean air by reducing carbon emissions. The Green Schools Coordinator and Energy Auditor are based at CCS Facilities. Their role is to monitor, instruct, and reduce waste at all levels within schools. Green Team volunteers include teachers, parents, students and a commitment to make energy conservation and waste reduction a priority for a healthy, sustainable future. CCS Green Certified Schools stand out as hubs for smart, capable, and determined world-changers!

In partnership,

*Hannah Ehrenreich
Executive Director
Sustainable Sandhills*






Five Pillars of the Go Green Initiative



Go Green Initiative
We're a school system of choice
and our choice is Green

“The Cumberland County school board recognizes that embedded in our commitment to provide an excellent academic experience for all students is the responsibility of the school community to be stewards of the environment, appreciating and understanding the flow of resources that sustain us, and ways in which we can minimize the impact of our activities on our environment. Supporting environmentally “Green” initiatives and creating a culture of sustainability afford us opportunities to achieve integration among North Carolina’s curriculum, values, and education mission. In addition, these practices foster sound financial management decisions”. To reinforce the county’s Go Green Initiative, administration regulations, adopted in 2015, have been put in place to address waste reduction as well as energy and water conservation through the Go ‘Green’ Initiative (Policy Code: 6530 Resource Conservation).

GO “GREEN” INITIATIVE PRINCIPLE PILLARS:

-  *Awareness/Education: Promoting sustainable practices by integrating activities into the student’s lesson plans and by communicating, celebrating and awarding positive change.*
-  *Pollution Control: Focusing on alternatives in transportation, cleaning, pest management and storm water control with the least potential impact on human health and the environment.*
-  *Waste Reduction/Recycling: Promoting the efficient use of materials and the reuse or recycling of discarded materials.*
-  *Water Conservation/Efficiency: Seeking to reduce water consumption through the use of efficient equipment and conservative practices.*
-  *Energy Conservation/Efficiency: Following the Cumberland County Schools Conservation/Incentive Plan.*

Sustainable Sandhills Green Schools Certification Program

Together, Sustainable Sandhills and Cumberland County Schools developed a Green Schools check list that supports the five principles. Schools complete certain prescriptive and elective measures to be certified as a Green School. Currently, eighty-five percent of Cumberland County School facilities have been Green Certified through Sustainable Sandhills. Others are working hard to attain this status. To be a green school means the school is recycling most of the waste it produces. It means they are conserving energy and being conscientious of the way heating and air conditioning is operated. It means the school encourages bus ridership, carpooling and walking to reduce carbon emissions. It means the school uses curriculum guidelines to incorporate ecological activities in their lessons, conserves water by using rain barrels for irrigation, and plants gardens with plants native to the region. It means developing STEM academies within the Career & Technical Education department providing curriculum focused on renewable energy and green technology, math & science, engineering, and natural science. It means we are working together to create a more sustainable future.

CERTIFIED GREEN SCHOOLS/BUILDINGS 2014-2016

Gray's Creek District* and the Jack Britt District+ are all Green Certified

Support Services

Central Services	Educational Resource Center	Prime Time	Operations Center
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Transportation

Elementary Schools

Alderman Road*	Alma Easom	Armstrong	Ashley
Beaver Dam	Ben Martin	Brentwood	C. Wayne Collier
Cliffdale	Cumberland Mills	Cumberland Road	District 7
E. E. Miller	E. Melvin Honeycutt+	Eastover Central	Ed V. Baldwin
Elizabeth Cashwell	Ferguson Easley	Gallberry Farms*	Glendale Acres
Gray's Creek*	Howard Hall	J. W. Coon	J. W. Seabrook
Lake Rim	Lillian Black	Long Hill	Loyd Auman
Lucille Souders	Manchester	Margaret Willis	Mary McArthur
Montclair	Morganton Road	New Century International+	Ponderosa
Raleigh Road	Rockfish	Stedman Primary	Stoney Point+
Sunnyside	Teresa C. Berrien	Vanstory Hills	W. H. Owen
Walker-Spivey	Warrenwood	Westarea	

Middle Schools

Anne Chesnutt	Douglas Byrd	Gray's Creek*	Hope Mills
Ireland Drive	John Griffin+	Mac Williams	New Century International+
Pauline Jones	Reid Ross	Seventy First Classical	Spring Lake

High Schools

Alger B. Wilkins Performance Learning Center	Cape Fear	Douglas Byrd	E. E. Smith
Gray's Creek*	Jack Britt+	Massey Hill Classical	Ramsey Street
Reid Ross Classical	Seventy First	South View	Terry Sanford
			Westover

AWARDS AND RECOGNITION

U.S. Green Building Council Sustainable Business Awards

Charlotte, N.C. (September 15, 2015) The U.S. Green Building Council, North Carolina chapter announced the winners of the 2015 Sustainable Business Awards, an annual recognition of companies, individuals and nonprofits that demonstrate exemplary commitment and achievements in creating a more sustainable future for North Carolina. Nominated by their peers, the award winners were recognized at the 2015 USGBC North Carolina Green Gala at the Ritz-Carlton in Charlotte.



The 2015 Sustainable Business Awards included:

- **A Green Apple a Day** is awarded to schools that exemplify leadership by integrating sustainability principles: **WINNER Go Green Initiative, Cumberland County Schools**. Cumberland County School's commitment to sustainability has resulted not only in energy savings and reduced carbon emissions, but a generation of students educated about waste reduction, regenerative processes and landfill alternatives.
- **Fearless Leader** was established to honor early-career professionals who provide outstanding leadership: **FINALIST Denise Renfro**, Director of the Academy of Green Technology.

"Most Americans see "green" as "good," they say energy conservation impacts their daily purchases and activities, and they claim they'd buy a more energy efficient home if they had the choice and not buy products from brands or companies that treat the environment poorly. The problem is, we don't see a lot of action backing up those words.

Global population continues to grow, demanding more of the earth's resources, and scientists keep sounding the alarm bell that temperatures are going up and sea levels are slowly rising.

Thus, building greener homes and buildings and living a greener lifestyle aren't just cool nice-to-haves; they're about creating a sustainable future for everyone" (Keynote Speaker: Suzanne Shelton).



Sustainable Sandhills Green Business Award; K-12 School

Fayetteville, N.C. (July, 2015) Congratulations to Cliffdale Elementary, Sustainable Sandhills 2016 Green Business Awardee in the category of K-12 School!

Since 2009, the Green Business certification is a triple bottom line checklist for businesses concerned with the health and wellbeing of the communities in which they live and operate. Green Businesses work with specific tools to create a positive environmental impact. Sustainability begins with leadership and ends with a better world.



Michael Tucker, Principal Cliffdale Elementary

Green Schools was a recognized award category in 2016. Representatives from all the nominated schools listed below convened at Hilltop House in the Historic Haymount District to recognize the impact these leaders, CCS Facility Managers and Principals, are making in Cumberland County.

All of the nominees have been Green Certified since the program's inception and have continued to sustain early efforts while expanding innovation for greater sustainability.

Although the race was close it was Cliffdale's dedication to provide staff development and full administrative support for resource conservation that made them an outstanding Green School.

Other schools considered for this award included:

E.E. Miller, Brentwood, Stoney Pont, Lloyd Auman, Lillian Black, J.W. Coon, Alma Easom, Beaver Dam, Elizabeth Cashwell, Gallberry Farms, and Ferguson Easley. Best of luck to all the nominees next year!

North Carolina K-12 Energy Managers Forum

Durham, N.C. (July 14th, 2015)- Over the past year, Brian Callaway (Durham Public Schools Energy and Sustainability Coordinator) and Dan Schnitzer (Chapel Hill - Carrboro City Sustainability Manager) have been meeting informally and talking shop about the unique challenges facing K-12 energy managers in North Carolina. They found that they shared many of the same frustrations but also that they were often able to share information that proved useful to the other -- from data points to contacts. It was in that moment that the pair conceived a forum that would be designed by K-12 energy managers, for energy managers.

On July 14th, Energy Operations Auditor, Hunter DeSario, and the GGI Coordinator, Gloria Lengel, attended the first ever N.C. K-12 Energy Managers Forum hosted by the North Carolina School of Science and Math. The forum was attended by dozens of representatives from school districts across the State. Attendees took the day to compare data and discuss topics to include Heating, Ventilation, Air Conditioning, Building Automated System (BAS) controls, data management, lighting retrofitting and projects, leveraging and financing funding sources and more.

The group discussed the myriad of organizational structures represented at the forum from districts like CCS with a community partner, to others that contract all their support staff to some whose central administration is 100% in-house on energy management.



Go Green Initiative Improvements

Green Team Advisory Council (GTAC)

The purpose of the Advisory Council is to guide, research and develop strategies to bring awareness and education to Cumberland County School's students. Originally this group brought forward the principles upon which the Go Green Initiative is based. Initially GTAC consisted of school personnel to include curriculum specialists, custodial services, maintenance personnel, and the Director of the Academy of Green Technology at Douglas Byrd High School.

At the beginning of the 2014-15 school year the Green Team Advisory Council reorganized to include not just those school personnel who work with the Go Green Initiative but also those environmental educators in our community. We have individuals from the city of Fayetteville Parks and Recreation, City Engineering as well as our county environmental educators from Soil and Water Conservation, Cooperative Extension, and the Forest Service.

Developing partnerships with our local resources is a win-win for all the schools and students in Cumberland County. This has led to more opportunities for quality environmental education activities to reach our students.

Green Team Leaders

Each school has a Green Team Leader who coordinates their Go Green Initiative. Team leaders are encouraged to involve other teachers and the school's custodial personnel to develop recycling programs.

As our Initiative has moved forward, many schools realize the importance of having their sustainability leader on their School Improvement Team. This allows all teachers to have input in developing successful green programs. Sustainability is seamlessly included as an integral part of the model for leadership teams.

Ideally each Green Team Leader is mentoring a student green team at their school. The training of students is vital to make sure the patterns and habits learned in earlier grades continue. Student green teams have complete their own water conservation audits, streamline recycling flow from class to bins or dumpsters, and take on training the next class of students for Go Green Initiative continuity.

New Principal Visits

Our school community has a large population that transitions in to and out of our county every year. Job changes, military transfers, and other circumstances create the need to keep our schools as up-to-date as possible. Every school year, the Go Green Coordinator meets with new principals to educate on the Go Green Initiative goals, practices, and programs. Our intent is to help principals understand they are the facility managers for their campus. We refresh their understanding of the initiative and discuss the correlation between temperature and cost regarding energy conservation. We ask that schools establish green teams consisting of a designated Green Team Leader, trained staff, and students. One of the strategies for developing successful green teams is to include them on the School Improvement Team (SIT). This brings the Go Green Initiative to the attention and activities of all.

Recertification

When the Go Green Initiative started the main impetus of the program was becoming a Green Certified School. All schools had to create recycling programs but those schools who wanted to embrace the green culture also selected strategies from each of the 5 principles of sustainability and adapted them to their school. 72 facilities are Green Certified. 2016 marked the beginning of a 2 year cycle of recertification. The schools work toward their recertification by district. Each semester there are 2-3 school districts that will work to become recertified. Schools must continue to build and improve on their sustainability strategies.

Those few schools that have not taken the step to become Green Certified are encouraged to step forward and become certified during the next year. Schools that do not become certified are not eligible for certain Energy Incentive Program bonuses.



Awareness & Education

First Annual Earth Day Celebration

Cape Fear Botanical Gardens (April 22nd, 2015)- For the first year of the Earth Day Festival, we started small and hoped to grow. Our target groups were our young learners with the focus being Kindergarten to 2nd Grades. Without the collaboration of the many local environmental educators, this Festival would not have become a reality. Many thanks to Cape Fear Botanical Garden who graciously shared with us the use of their facility.

We had many partners who came to teach about topics regarding the environment and sustainability including:

- Beekeepers from Hoke, Harnett and Cumberland Counties
- Representatives from the NC Department of Environment and Natural Resources
- Wildlife Resource educators from the John Pechmann Fishing Education Center
- Experts from the Division of Air Quality
- Carver's Creek State Park, our local Parks and Rec. and the State Parks office in Raleigh.
- City of Fayetteville Storm Water Division and Soil/Water Conservation
- Master Gardeners

Without these partners our resources would be very scarce for our students not just for the Festival but throughout the year.



Second Annual Earth Day Celebration

Cape Fear Botanical Gardens (April 22-April 23)- The Go Green Initiative and the Green Team Advisory Council invited Kindergarten to Second grade students to our second annual Earth Day Celebration. Our event was hosted by the Cape Fear Botanical Gardens which was spectacular in full-bloom.

Cumberland County Green Schools had a wonderful Earth Day Celebration on Thursday, April 21. This year we were again part of the Earth Day Network of activities and celebrations. It was also our second year as host and participant of the North Carolina Science Festival. Unfortunately, Friday was cancelled due to inclement weather.

This year the Green Schools Advisory Council partners added another 100+ slots for more students to participate. This also increased the number of activities offered to include:

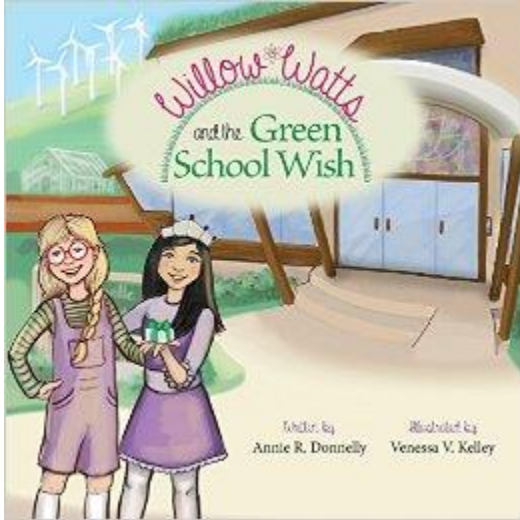
Reading in Nature	Green Puppeteers	Turtles: Catch 'n Tag	The BZZZZ About Bees
Veggie Smoothies	Green School Wish	Natures Cookies	Butterfly Beauties
Water Quality Awareness	Pollution Prevention	Soil and Earth Labs	Moving, Moving, Moving
Solar & Wind Energy	Recycle Bottle Bird Feeders	Make Your Own Seed Bombs	Why We Recycle
Land Use Education	Discovery Walk in Nature	Pollywogs & Frogs	Much, Much More!

A big thanks goes out to the students from Douglas Byrd's Academy of Green Technology and Gray's Creek Horticulture program for a job well done. Their professional behavior, helpfulness, politeness and ability to adapt to changing jobs worked seamlessly with the professionalism of our partners.

Douglas Byrd Academy of Green Technology students took the lead this year as instructors exploring the world of alternative energies with the younger children.

Gray's Creek Horticulture's worked with the partners facilitating in various activities with the children.

Many of our partners were extremely complimentary about how the students carried themselves and acted at the Celebration. We look forward to having them participate again next year.



During this Earth Day Celebration the Go Green Initiative booth was manned by the CCS Energy Operations Auditor allowing him the rare opportunity to shift gears and focus more on students and education.

This year the center attraction was a book by Annie R. Donnelly titled Willow Watts and the Green School Wish. With help from her pen pal Willow Watts, Princess Smog teaches her Grandfather why a Green School is the perfect birthday gift for her and her fellow students.

The interactive story reading afforded students to learn about the multiple levels of the energy pyramid which starts with conservation, than efficiency, and is finally

capped with renewable options.

Students discussed the differences between the three basic levels and identified green actions taken at their schools, and where those actions would fall within each category. Students were also asked about what future steps they could take at both school and home.

Students also focused on waste reduction and recycling; playing a pin-the-tail on the donkey style game where various objects were identified and placed in either paper, glass, metal, or plastic containers. Even organics and compost got in on the fun! The fundamentals of how to maintain the purity of the recycling stream, and why, became clear.

Water conservation was reinforced by showing the importance of following every-other-day style irrigation habits. This sparked an impromptu student led discussion about plants native to North Carolina and how they can be incorporated into water-efficient and natural landscapes.



CAPE FEAR BOTANICAL GARDEN
FAYETTEVILLE, NC



Go **Green** Initiative
We're a school system of choice
and our choice is **green**



Energy Conservation and Action Month (October) Poster Art and Slogan Contest

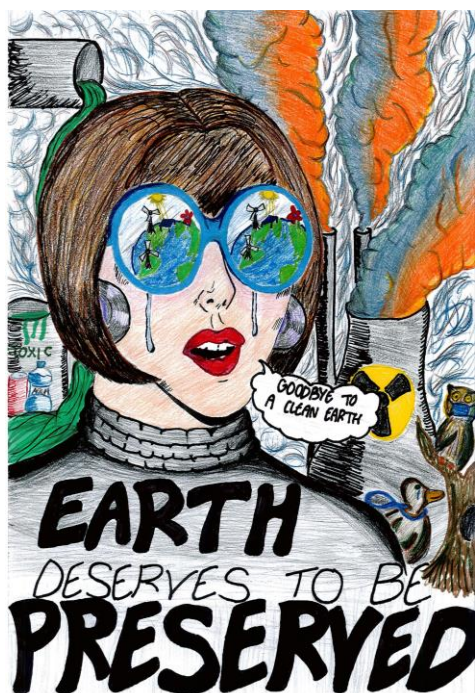
Each year we observe Energy Conservation & Action Month and we call on all our artistically inclined K-12 students to draw and color their interpretation of what Energy Conservation and the actions associated with conserving look like. Each year we are always impressed by the number of students who respond and it is difficult to pick winners from all the entries!

Just three entries per school are allowed which are then judged on subject matter, originality and creativity, artistic execution and craftsmanship, and appropriateness for reproduction. First place comes with a \$100 cash prize,

second place \$75, and third place \$50 plus all entries selected in the top sixteen are displayed in the Cumberland County Board Room from December to February. First place is published in poster form and distributed to every school.



First Place High School-Kayla Fiser



Second Place High School-Savanna Case



Third Place High School- Jordyn Horse

Pechmann Center Water & Soil Education

Lake Rim Park (Fayetteville, NC)- Middle School students from across the district had the chance this past autumn to explore factors that influence water quality within Cumberland County during Water & Soil Educational field trips to the Pechmann Center at Lake Rim. The Go Green Initiative staff teamed up with Parks and Recreation Rangers to orchestrate a round-robin style educational circuit featuring stations on Macro-Invertebrates, chemistry of water quality, soil and water quality, storm water, and human impact on water quality. These stations are designed to align with N.C. essential standards and clarifying objectives as follows:

- 8.E.1.1 Explain Local river basins and water availability.
- 8.E.1.3 Safety and potability of Water Supplies in NC based on physical and biological factors including Temperature, DO, pH, Nitrates and Phosphates Turbidity and bio-indicators.
- 8.E.1.4 Conclude that the good health of humans requires: monitoring of the hydrosphere, water quality standards, water treatment, maintaining safe water quality and stewardship.

Approximately 920 middle school students participated in the class, including future E.E. Smith student's currently attending school on Fort Bragg.



Rotary Club Christmas Parade

December 10th, 2015 (Downtown Fayetteville, NC)-The first annual Rotary Christmas Parade in Downtown Fayetteville had about 50 entries; which has now grown to 110-120 units with some coming from out of state. Support from the business community has always been a pillar of the event and Cumberland County Schools, in partnership with Cumberland County Solid Waste (CCSW), fully support parade efforts. Every year CCSW provides a truck and driver for the Go Green Initiative staff to decorate for the Christmas parade while bringing attention to the counties 'greening' efforts. In 2015 the theme was 'Don't be an Energy Grinch' reminding onlookers to conserve during the holiday season.

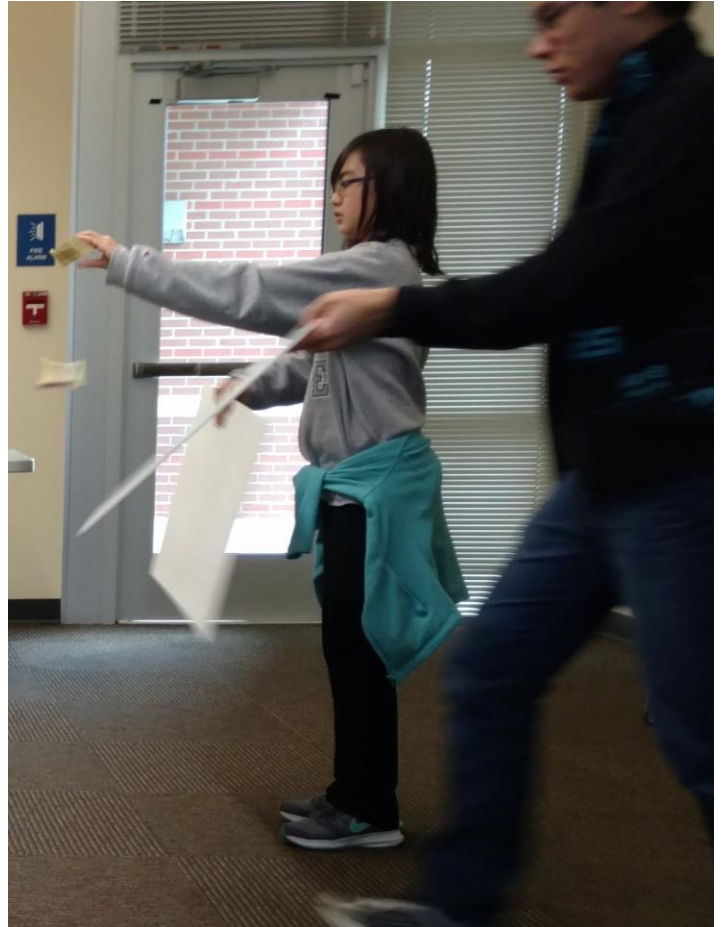


'Don't Be and Energy Grinch'- 2015 Go Green Initiative Entry

Clean Energy Summit-Kids Summit

New Century International Elementary (Fayetteville, NC)- On February 20, 2016, in conjunction with the annual Sandhills Clean Energy Summit presented by Sustainable Sandhills, the students of Cumberland County hosted their own Clean Energy event. The Kids Summit was held in the West Regional Branch Library, a part of New Century Elementary which is a certified Green building designed for passive natural light and operated with geothermal energy efficiency and sustainability in mind. The curriculum for the Kids Summit focused on sustainability and renewable energy in our community.

The students participated in featured activities which included solar oven cookies which were heated but not cooked as the clouds were obscuring the sky for the oven to work as planned. Bricks for Kids presented projects incorporating wind energy as well as solar energy. In culminating the session, students were tasked to create a tumble wing glider designed for clean aerodynamic flight using telephone directory pages. This was a topic that had become quite popular at the time as the first solar powered aircraft was making its way around the world. The competition was intense as each student attempted to fly their tumble wings. Each student had to fly their wing on a layer of air created above a large flat yard sign as the student walked across the room. Not as easy as it sounds; very challenging and enjoyable from the feedback.



Summer Camp

Massey Hill Recreation Center (Fayetteville, N.C.)- Learning in Cumberland County Schools doesn't stop at the end of the school year and neither do energy savings! This summer the Go Green Initiative partnered with Parks and Recreation to bring interactive and engaging energy lessons to select camp sites. The Summer Day Camp allows participants to experience a summer of organized adventure and fun consisting of activities, crafts, games, and off-site field trips for children who have completed Kindergarten (and are under 13 years of age). This gave CCS students a perfect opportunity to show off their energy know-how and educate their private school and home schooled compatriots as to what it means to Go Green in Cumberland County!



Campers from all across the county spent an afternoon at Massey Hill Recreation Center gaining a deeper understanding of what exactly energy is and why it is so important to conserve. Campers discussed ways they conserve energy at home and in the classroom, participated in an interactive story 'Willow Watts and the Green School Wish', and even raced against an electric fan to manually keep a pinwheel spinning...now that takes a lot of energy! The afternoon concluded with a butterfly release in the community garden as the campers cheered a loud and thunderous "Welcome to the World!"

By the Numbers: Waste, Water, & Energy





From the Auditor

As part of the Superintendent’s five-year Strategic Energy Plan, as defined by Board action, during the 2015-2016 school year CCS began instituting regular night, weekend, and holiday audits in order to identify and apply energy, water, and other conservation and efficiency measures.

The term *energy audit* is twofold: An energy audit can refer to the process of having a professional energy auditor assess your building for energy savings opportunities, or refer to the results of the energy assessment process: the energy audit report.

An **energy audit report** is a carefully thought out plan, which, if followed, will lead you to reduced energy costs. This could include things such as behavioral change recommendation or equipment upgrades. Every building is different, and each contains different opportunities which can reduce energy usage. This is why every building requires a specific and unique energy audit structured around a universal checklist process.

During the energy audit, an energy auditor will visit your site and possibly interview your facility manager, inspect your lighting, air conditioning, heating and ventilation equipment, controls, refrigeration, water consuming equipment, and anything else that is using energy; including appliances. Depending on the type of the audit, the auditor may take measurements of temperatures, pressures, light levels, power draw, and more.

Energy Audit Report				
School: ██████████				
Date: September 1st, 2016				
Time: 9:51 pm				
Annual energy & money wasted by not turning things off:		% of Total Waste		
ELECTRONICS:				
Total computer-related kWh wasted:	45,493			
Total computer-related dollars wasted:	\$3,411.96		89.44%	
LIGHTS:				
Total kWh wasted due to lights:	4,522			
Total dollars wasted due to lights:	\$339.19		8.89%	
APPLIANCES:				
Total kWh wasted due to appliances:	850			
Total dollars wasted due to appliances:	\$63.72		1.67%	
Total kWh wasted:		50,865		
Total Money Wasted:		\$3,815		
	Authorized	All Facilities		
	Thermostat Heating Season:	71° +/- 3°	Gyms & Auditoriums ≤68°	
	Set Points: Cooling Season:	74° +/- 3°	≥75°	
Putting it in Perspective:				
This wasted energy is equivalent to this many gallons of gasoline:	1,509			
This wasted energy creates this many pounds of carbon dioxide (CO2) released into the atmosphere*:	11,713			
This wasted energy is equivalent to an average passenger car in the U.S. traveling this many miles:	33,960		This is the same as this many trips around Earth:	1.4
This wasted energy is the equivalent to this many pounds of coal if all of our energy came from coal.	106,816		The actual amount of coal used to generate this wasted electricity is this many pounds:	41,658
This is roughly equal to		8.48%	of the average NC teachers salary.	
Auditors Notes and Work Order Requests:				
Hunter D. DeSario				
Energy Operations Auditor				
hunterdesario@ccs.k12.nc.us				
910-678-7047				
Policy Violation! - Thirty-three (33) televisions were found left on during this audit with the majority of them being old CRT's. \$2,957 in annual waste estimated from this audit. Highly recommend school-wide removal without replacement; contact Powerhouse Recycling.				
				
		Go Green Initiative We're a school system of choice and our choice is green		

Energy Incentive Program

The CCS Incentive Plan rewards positive change by rewarding those schools that reduced their kilowatt hour consumption by more than 4% over the previous year. **Thank you to the schools that made a concerted effort last school year to encourage energy education and conservation.** Your wise use of energy and water benefit the whole school district but more importantly, your investment in time and education for staff and students has a lasting and world-saving impact! The conservation and sustainability strategies these schools put to work has saved CCS thousands of utility dollars. These dollars can now be utilized to meet the educational needs for the next class of students and teachers.

Energy conservation is not only a great investment but it fulfills an ethical obligation to conserve our natural resources and nonrenewable energy supplies for future generations while simultaneously opening schools up to serve as positive role models for the community.

How It Works

Eligibility to Receive Incentive Money

Schools that achieve a 4% decrease in kWh usage for the first year

-Or-

Schools that qualified the year prior *and* continued to have a kWh reduction of 1% or more this year

Incentive

Twenty-five percent of the dollars saved

Bonus

The top high school, middle school, and two elementary schools shall receive a \$5,000 bonus in addition to the 25% of total cost avoidance.

Incentive Money Disbursement

In school year 2014-2015 **\$58,172** was returned to the schools, with Ramsey Street High, Anne Chesnutt Middle, Beaver Dam Elementary, and District 7 Elementary all winning a \$5,000 bonus!

Of the forty-six schools eligible for the Energy Incentive Program in school year 2015-2016, **\$61,302** was reallocated from the utility budget to either instructional supply or campus beautification funds for qualifying schools! In addition to these savings an additional **\$20,000** was divided amongst T.C. Berrein, Lucile Souders, Spring Lake Middle, and A.B. Wilkins as the bonus winners.

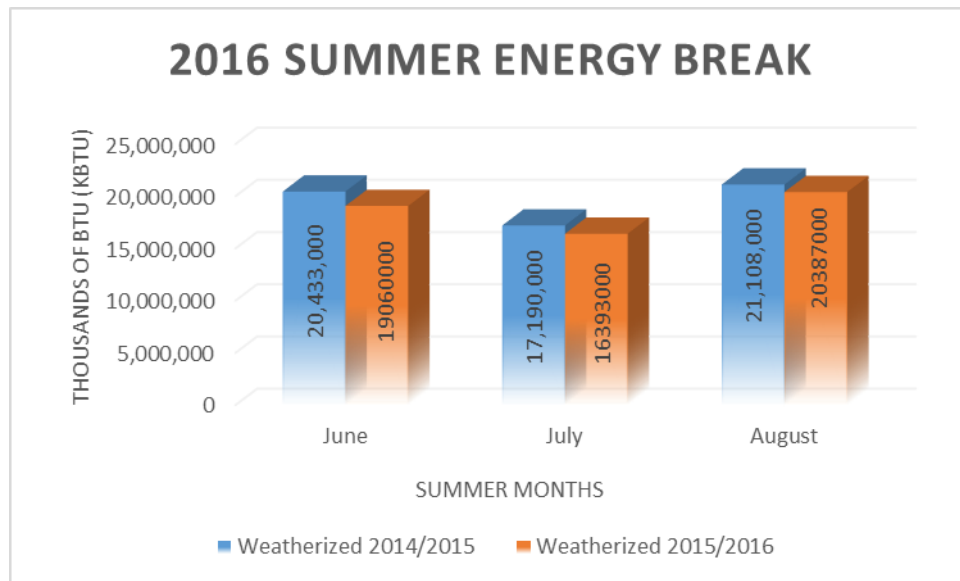


The 2014-16 Energy Incentive Program returned \$139,474 to schools for following sustainability policy & doing the right thing!

Summer Shut Down

The 5th annual CCS summer shut down process was more successful than ever. Despite challenges the district as a whole was able to reduce electric and natural gas consumption by approximately 2,891,000 kBtu compared to summer 2015!

Due to unexpected extension of End of Grade testing the summer energy break in 2016 was not able to officially commence until late June. As seen by the chart below from the month of June into the month of July we saw a 2,667,000 kBtu reduction in energy use whereas in 2015 we were able to save 3,243,000 kBtu by starting right after school closed.



The auditing team this year drew on the experience of four extremely proficient subject matter experts to maximize the proficiency of these shut down audits, which included end of year waste audits as well.

While most facilities were, in fact, found to be in compliance with shut down procedures and Resource Conservation Policy 6530 and 6530-R there is still work to be done in aligning the efforts of the Energy, Custodial, Maintenance, and School staff to achieve maximum impact.

The auditors identified nineteen key facilities (8 high, 5 medium, 6 low priority) during the auditing process based on either a large amount of classroom controlled air conditioning units, known equipment malfunctions, observed behavioral trends, or simply a large savings potential- and it paid off!

Two of those high priority schools, T.C. Berrien and Lucile Souders, achieved such dramatic savings during their summer shut down process that it helped each secure \$5,000 in incentive money.

*Note: These figures are derived from utility data that was first converted from kWh or therms to kBtu and then normalized for weather

Pollution Control

Emissions Reduction & Air Quality

The emission factors: 7.03×10^{-4} metric tons CO₂ / kWh;
 0.1 mmbtu/1 therm \times 14.46 kg C/mmbtu \times 44 kg CO₂/12 kg C \times
 1 metric ton/1,000 kg = 0.005302 metric tons CO₂/therm



Carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O) are the principal greenhouse gases emitted to the atmosphere from the burning of fossil and biomass fuels used in commercial buildings. Cumberland County Schools has begun to calculate and track individual facilities greenhouse gas emissions (including carbon dioxide, methane, and nitrous oxide) from on-site fuel combustion and purchased electricity and district heating and cooling.

Using the Environmental Protection Agency (EPA) Greenhouse Gas Equivalencies Calculator, based on the Emissions & Generation Resource Integrated Database (eGRID) U.S. annual non-baseload CO₂ output emission rate, we are able to convert reductions of kilowatt-hours and natural gas usage into avoided units of carbon dioxide emissions.

During the 2015-2016 school year Cumberland County Schools saw a reduction of approximately 8,282,713 kilowatt hours of electricity and, 559,742 therms of natural gas.

This equates to 6,826 metric tons of greenhouse gas emissions!

That is the equivalent to reducing:

Greenhouse gas emissions from



CO₂ emissions from



Transportation

There are over 500 publicly owned school buses, transporting over 28,000 school age children over 4.5 million miles annually in Cumberland County. These buses are diesel-fueled, with high amounts of exhaust emissions. Although school buses are one of the safest means of transporting children to and from school, emissions from diesel-powered school buses constitute a serious health risk to children. While it is true that breathing diesel exhaust has health implications for everyone, children are much more susceptible to this pollution than healthy adults because they breathe more air relative to their body weight and their respiratory systems are still developing.

Transportation has also improved the quality of air in the bus parking lot and at the school by ensuring that buses are not idling for more than five minutes, also putting stickers on the buses to remind the drivers of the idling policy. We ensure that the buses are not parking close to the school building. Signs have been posted where parents park to pick up their children, reminding them to shut off their engines while waiting for dismissal. All of the above are part of our campaign to reduce emissions and improve air quality around the outside Cumberland County Schools.

Using the TIMS (Transportation Information Management System) routing system, transportation supervisors have worked hard to reduce the number of buses on the road while transporting more students to more schools. Bus routes have been consolidated and re-routed to ensure the buses are not crossing over each other during their routes. Transportation has reduced the number of stops on each route by creating corner stops. This helps to reduce the number of route start/stops; thereby, conserving fuel and time. We are putting into place a system that enables us to have GPS units on each bus. This will aid in our continued effort to make routing adjustments to improve transportation efficiency.

Integrated Pest Management

In compliance with G.S. 115C-47, the CCS BOE approved a new policy regarding Integrated Pest Management (IPM). IPM is a comprehensive approach that combines prevention, surveillance, and environmentally sound methods to prevent and solve pest problems. The goal of IPM is to protect human health by adequately controlling pest populations and reducing human exposure to pesticides. Spraying is done when and where monitoring has indicated that pests will cause health risk or medical injury and no other method of control is considered effective.

Green Products

In making purchasing decisions, CCS often considers the environmental impact of the purchase. It is recognized that buying green has a positive impact on health and the environment. Therefore, CCS purchases products that contain recycled content or emit fewer toxins. Many school custodians use environmentally friendly cleaning products to help improve indoor air quality and reduce the health problems associated with traditional cleaning supplies.

WASTE REDUCTION & RECYCLING

Waste Reduction & Recycling

The North Carolina General Assembly sees the value in school recycling programs and has adopted statutes not only empowering local school boards to establish recycling programs but actively encouraging the formation of these programs as part of school board's inherent powers and duties (§ 115C-47(41)).

As part of Policy Code 6530: Resource Conservation, the Cumberland County School Board has directed the Superintendent and his staff to develop a comprehensive waste-reduction, recycling, and reuse plan for all aspects of its operations.

Currently there are eight schools in Cumberland County that utilize a single stream, otherwise known as "co-mingled", recycling process while all other facilities sort their recycling into separate containers.

School Year	Recycling	Cardboard
2014-2015	281.08 tons	865.12 tons
2015-2016	282.49 tons	788.93 tons



In addition to reducing waste in the schools, operations and maintenance (O&M) staff aim to recycle materials and to resell unnecessary equipment through various channels such as GovDeals.com. GovDeals provides services to various government agencies that allow them to sell surplus and confiscated items via the Internet. Each participating agency has its own auction rules and regulations and may be subject to government ordinances.

School Year	GovDeals Revenue
2014-2015	\$10,072.00
2015-2016	\$19,600.00



Cartridges for Kids

In September of 2015, Cumberland County Schools began a partnership with Cartridges for Kids, an environmentally-friendly program that pays cash for recyclable items. Participation helps protect the environment by keeping electronics out of landfills. Since 1999 CFK has helped schools and non-profits raise over \$22 million! Schools can earn bonuses up to 12 times a year for sending in most cell phones, inkjet and laser cartridges, laptops, MP3s, PDAs and tablets/e-readers/notebooks.

To date the program has brought in **\$350.75** for the Go Green Initiative. Although this is a modest figure, every cartridge recycled diverts harmful electronic waste from landfills!

E-Waste

In addition to recycling electronic waste generated directly from the school system, the Go Green Initiative teams up with Cumberland County Solid Waste frequently to facilitate community electronic-waste drives (e-waste) throughout the year. These e-waste drives provide an opportunity for volunteer students to give back to the community by providing an easy and responsible method to dispose of unwanted electronics.

Saturday April 2, 2016
8 am-noon
E-WASTE and SHREDDING

Sponsored by: **The Re-Store Warehouse** Location: **COURTHOUSE PARKING LOT On Gillespie Street**

EWASTE: Anything with a cord. TV's less than 50", stereos, computers, printers, lamps vacuums, radios, small kitchen appliances, etc.

SHREDDING: Residential ONLY. Paper, w/clips staples ok. No limits

Logos: Fayetteville, Cumberland County, Go Green Initiative, Sustainable Sandhills, a Shred ahead

E-Waste Drive Collection Tonnages

Date	Tons of E-Waste Recycled
11/10/2016	7.71
04/02/2016	7.12
11/14/2015	6.23
05/16/2015	4.03
Totals	25.09 tons

“The amount of e-waste is expected to grow to 49.8 metric tons in 2018, with an annual growth rate of 4% to 5%” -EPA

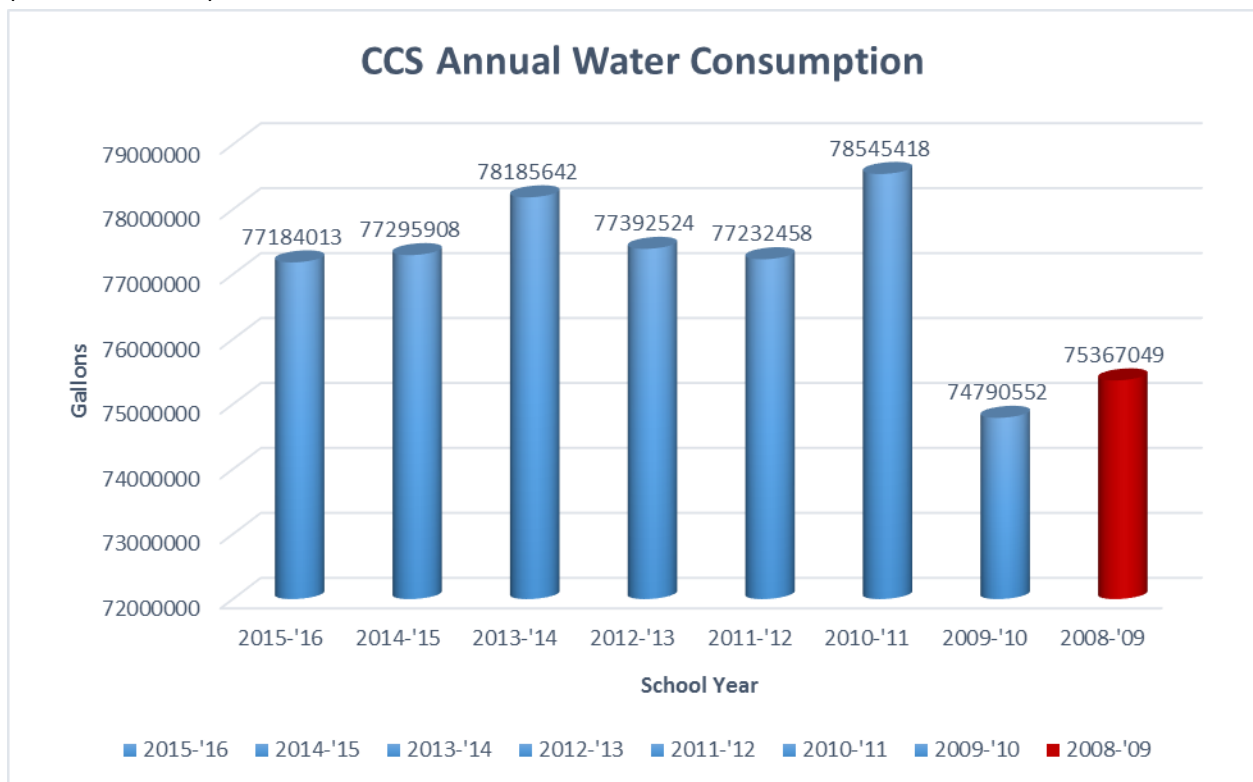
Water Conservation & Efficiency

Water

In addition to energy, water conservation and efficiency, is now a key part of responsible K-12 facility and operations management. Minimizing use of water and applying sustainable solutions are key activities towards responsible management of resources. Knowing when, where and how you're using water can give you the information to understand how you can improve efficiency.

According to a publication by the US Environmental Protection Agency, titled *Water Efficiency in the Commercial and Institutional Sector: Considerations for a WaterSense Program*, water use in the commercial sector could be reduced by approximately 40 percent from 2000 levels in California alone, or 317 billion gallons of water per year. The study notes that "Although these estimates are specific to California, the substantial savings could be achieved in other areas of the country [Including North Carolina] using similar technologies and practices. These significant savings highlight the enormous potential for a national-level program" (Source: Modified from the best estimate of practical savings in the CII sector from Peter H. Gleick, et. al., *Waste Not, Want Not: The Potential for Urban Water Conservation in California*, November 2003).

In Cumberland County, for school year 2015-2016 overall mixed indoor/outdoor water use decreased modestly, for the second year in a row, but year-to-year consumption remains somewhat consistent (See chart below).



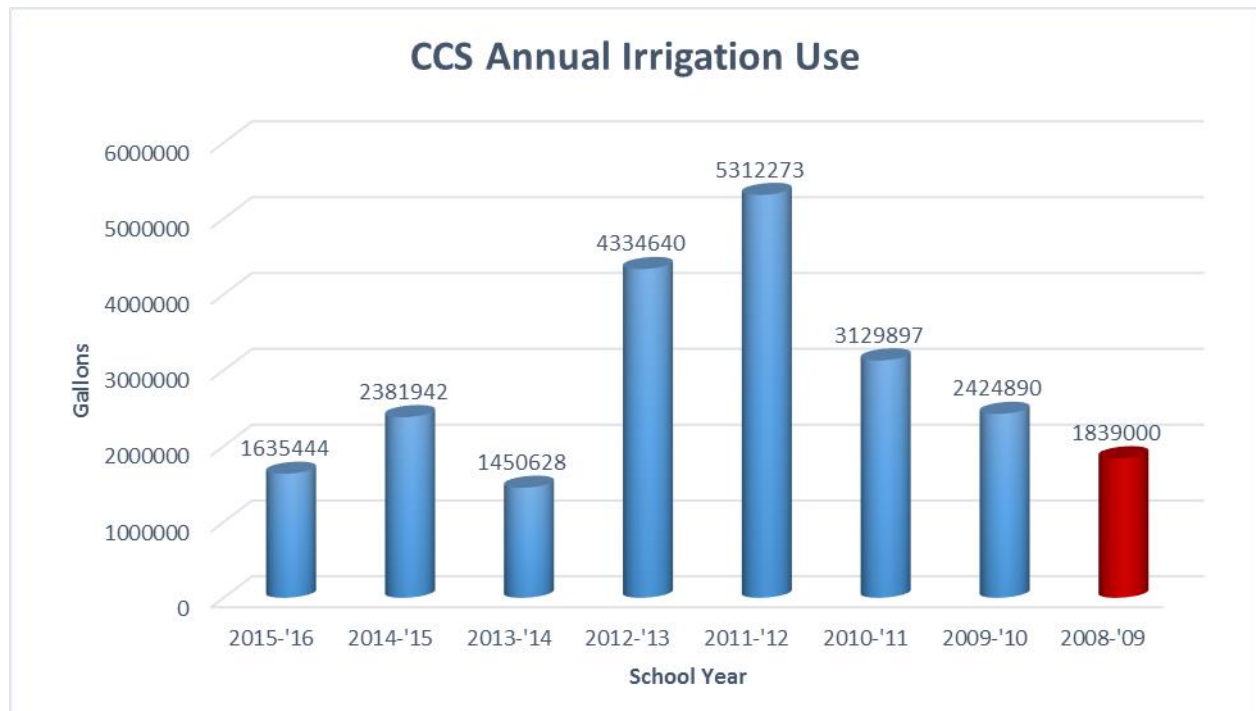
It is important to note that in regards to our 2008-2009 baseline, in 2010 construction was completed on Grays Creek Middle, which includes irrigation systems, as well as New Century Elementary. Meanwhile, District 7 was just a year old. In 2011, New Century Middle School was added to the CCS footprint as well. In all, these four schools brought an additional 407,452 square feet, plus approximately 3,750 square feet in HUT space, to the CCS which could account for a *portion* of the 5.02% increase seen in school year 2010-2011 (See table below).

District-Wide Water Use Reductions from Year Prior							
2015-'16	2014-'15	2013-'14	2012-'13	2011-'12	2010-'11	2009-'10	2008-'09
-0.14%	-1.14%	1.02%	0.21%	-1.67%	5.02%	-0.76%	← % of Change

Irrigation

In 2007-2008, North Carolina suffered from the worst drought in over 100 years of recorded history. The Drought Management Act was signed into law in July 2008. The law expands the ability of the governor and local communities to respond when drought conditions worsen and encourages greater planning, conservation and cooperation. (Source: SaveWaterNC.org)

Cumberland County has since adopted a water conservation policy which ensures compliance with both North Carolina’s drought guidelines and Fayetteville Public Works Commissions guidelines for irrigation.



During the 2015-2016 school year, total annual irrigation use declined to levels at or below baseline consumption for only the second time in over seven years!

Although most schools use water for

restrooms, cooling and heating, irrigation, and kitchens, the percentage of water consumption devoted to different end uses varies among schools. The most significant difference appears to result from the large use of irrigation water in schools with athletic fields. High schools generally have more irrigated athletic field area per student than elementary schools, but this isn't always the case.

Some facilities, such as Central Services and Max Abbot Middle, were able to see irrigation reductions in the ninety-five percentile range while others saw irrigation rise as much 146% from the year prior. Without a clear correlation to any significant changes in facility use or purpose, positive changes in irrigation are largely believed to be due to the sharp vigilance of athletic directors and facility managers while negative increased use of water indicate the need for clearer use guidelines and communication within schools regarding water conservation.

The image shows a sign for "Watering Schedules" from Fayetteville's HomeTown Utility and Weather Insights. The sign includes the following text:

PWC
Fayetteville's
HOMETOWN UTILITY

Weather Insights

Watering Schedules

PWC water customers are reminded to follow the year round Odd-Even schedule for outdoor watering.

Even Addresses (ending in 0,2,4,6,8) Monday, Wednesday, & Saturday	Odd Addresses (ending in 1,3,5,7,9) Tuesday, Thursday, & Sunday
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Energy Conservation & Efficiency

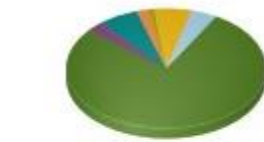
Energy

Second only to salaries, utilities are the second largest category for Cumberland County school dollar expenditures. The majority of utility dollars go towards electric utilities, with natural gas a distant second place. The Go Green Initiative strives to reduce these utility costs using a three-pronged approach consisting of:

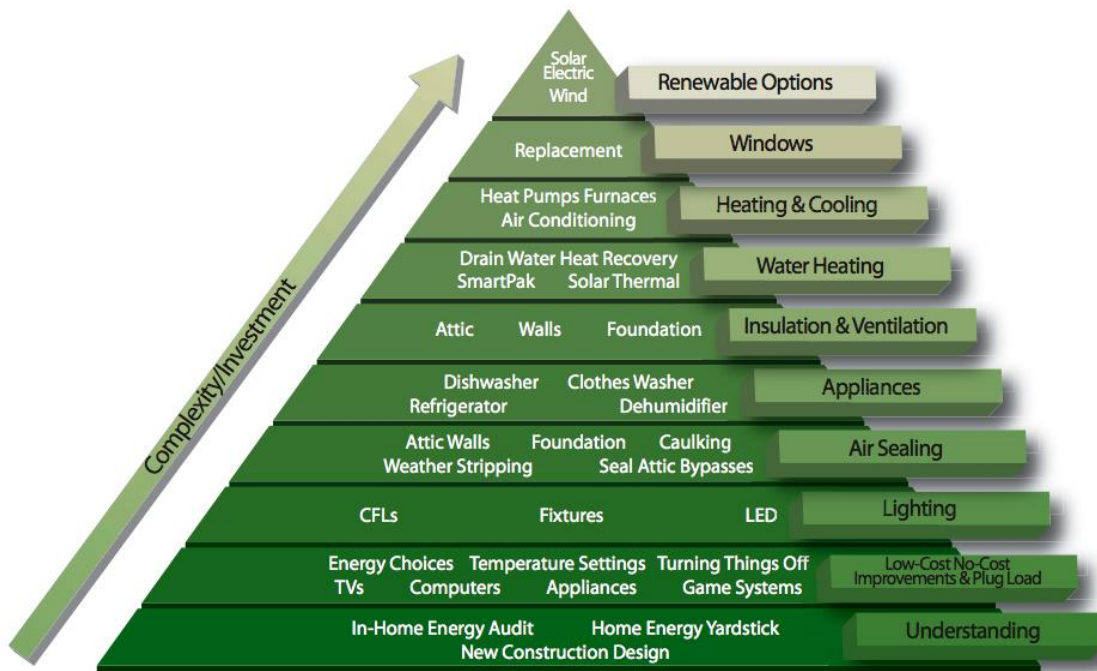
- conservation efforts,
- efficiency measures,
- renewable energy options.

Since school year 2010-11, electrical kilowatt hour (kWh) usage for Cumberland County Schools has steadily declined. To compensate for weather differences the data is normalized based on heating/cooling degree days and the cost avoidance is calculated based on the average cost of each utility. Over a five-year period, our total cost avoidance was over **3.7 million dollars!** This remarkable reduction in consumption can be directly attributed to: (1) conservation efforts demonstrated by school personnel and students; (2) operational modifications justified by day-time and night-time audits completed by the Go Green and the Energy Department Staff; (3) enhanced preventative maintenance protocol; (4) the installation of more efficient equipment, building controls, and light fixtures; (5) school district policy guidance that prioritizes energy conservation.

2016 Cost Summary Pie



Electric	\$6,482,932.89
Fuel Oil	\$195,499.86
Irrigation	\$14,140.61
Natural Gas	\$551,911.83
Other Utility	\$182,076.82
Propane	\$57,948.39
Sewer	\$509,646.09
Water	\$348,534.24



Efficiency Upgrades: Douglas Byrd High LED Project

Over the summer of 2015, the CCS Operations Staff removed the ceilings on the 1st Floor of Douglas Byrd High and updated the lighting with efficient LED fixtures. The Academy of Green Technology at Douglas Byrd High participated in the project by documenting the fixtures removed and recording the lamps replaced and the quality of the lighting.



T-12 Fluorescent Fixture – 2 Lamp 74 Watts replaced by Zr24 LED Fixture – 44 Watts

Before work began, CREE Lighting of Raleigh developed a lighting plan for each classroom. After the ceilings were removed, the CCS Electrical Department removed the existing fluorescent fixtures and replaced them with the new energy efficient LED fixtures. Due to recommendations from the Electrical Department the number of planned fixtures was decreased.

742 fluorescent fixtures were replaced with 549 LED fixtures. The results were staggering. The average light output for classrooms increased from 31 to 60 lumens. In North Carolina the minimum recommended lighting for classrooms is 40 lumens. The LED lighting exceeded requirements with less fixtures. Wattage was reduced from 58,278 to 26,126. Under normal operating conditions, it is estimated that the energy savings will be \$9,467 a year.

Lighting Upgrade, total cost: \$59,430. Energy rebates of \$12,910 mean a payback period achieved in only five years!

Cost Avoidance by the Numbers

School Year	Weather Normalized Avoidance	Electrical Cost Avoidance (Average Cost per MMBtu)	Weather Normalized Natural Gas Avoidance	Natural Gas Avoidance (Average Cost per MMBtu)	Total Cost Avoidance (Average cost per unit)
2011-2012	15,136 MMBtu	\$414,345	23,034 MMBtu	\$219,292	\$633,637
2012-2013	21,252 MMBtu	\$581,779	7,717 MMBtu	\$73,470	\$650,249
2013-2014	22,217 MMBtu	\$690,159	1,376 MMBtu	\$12,820	\$702,979
2014-2015	24,542 MMBtu	\$791,220	1,968 MMBtu	\$15,327	\$806,547
2015-2016	28,240 MMBtu	\$927,921	18,956 MMBtu	\$143,616	\$946,877
TOTALS	111,387MMBtu	\$3,405,424	53,051 MMBtu	\$464,525	\$3,740,289.00



Btu-British Thermal Unit; One Btu is the heat required to raise the temperature of one pound of water by one degree Fahrenheit.

kWh- A unit of energy equivalent to 3412.14 Btu; used

to measure electric utilities.

Therm- A unit of heat equivalent to 100,000 Btu; used to measure natural gas utilities.

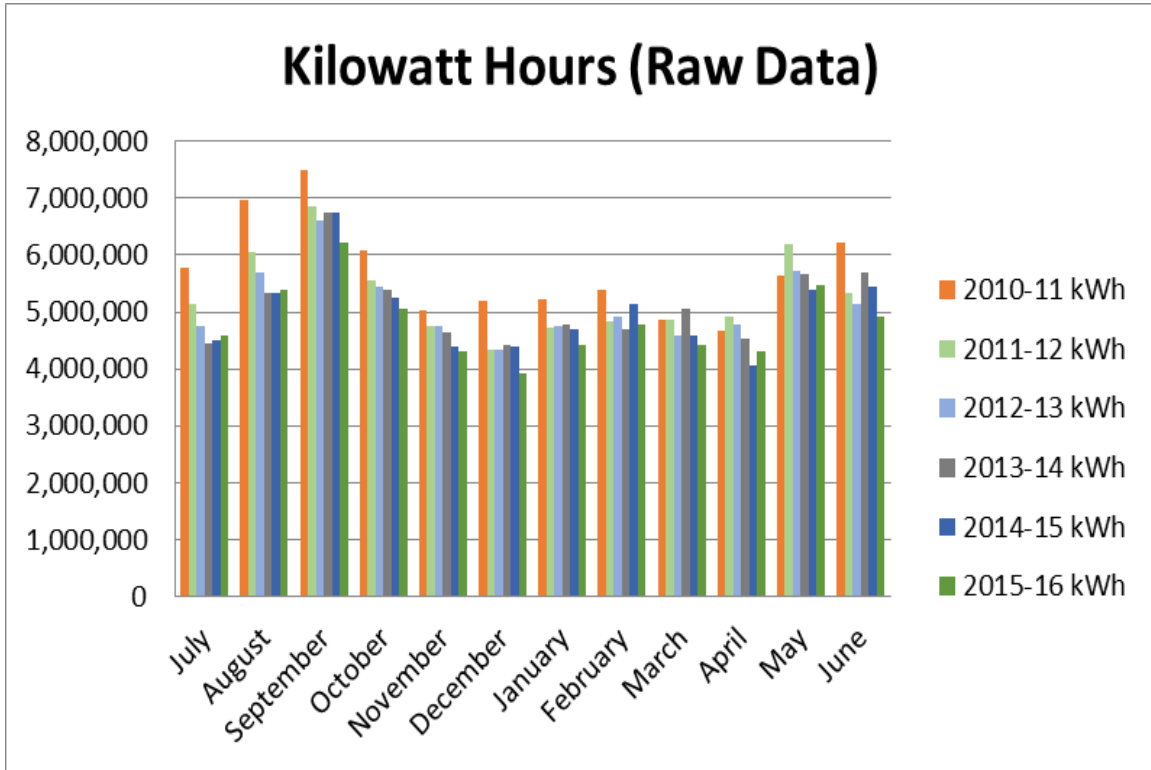
MMBtu—Equals 1,000,000 British thermal units (Btu)

Weather Normalized Energy: The energy use your property would have consumed during 30-year average weather conditions. For example, if 2012 was a very hot year, then your Weather Normalized Site or Source Energy may be lower than your Site or Source Energy Use, because you would have used less energy if it had not been so hot.

Cost avoidance is a cost savings in reference to an expense that has not yet been incurred.

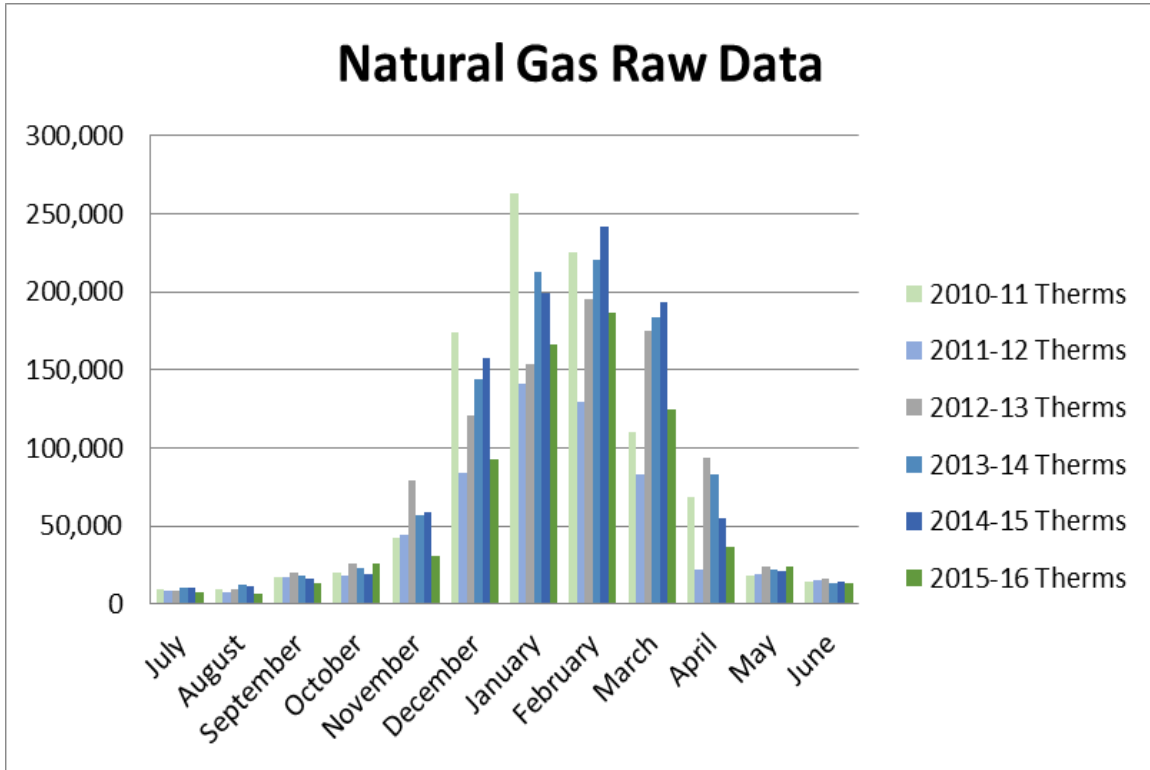
Based 2010-2011 school year baseline, the “control” year prior to the Go Green Initiative launch, CCS is able to calculate costs we were able to ‘avoid’ through conservation and efficiency measures.

Cost Avoidance by the Numbers: Raw Data



Electric kWh Raw Data													
	July	August	September	October	November	December	January	February	March	April	May	June	Total
2010-11 kWh	5,774,543	6,975,171	7,485,970	6,073,123	5,018,912	5,182,226	5,236,079	5,382,311	4,873,330	4,662,121	5,629,813	6,222,630	68,516,229
2011-12 kWh	5,139,824	6,065,746	6,851,035	5,567,966	4,762,135	4,336,667	4,723,967	4,823,746	4,861,897	4,922,516	6,185,918	5,339,210	63,580,627
2012-13 kWh	4,746,389	5,686,996	6,595,454	5,437,879	4,750,455	4,332,418	4,739,823	4,921,420	4,585,021	4,769,219	5,720,345	5,140,430	61,425,849
2013-14 kWh	4,443,683	5,331,586	6,735,788	5,393,011	4,650,483	4,433,449	4,784,536	4,685,738	5,049,908	4,517,323	5,663,051	5,686,697	61,375,253
2014-15 kWh	4,493,730	5,324,693	6,731,955	5,237,455	4,382,804	4,381,221	4,688,656	5,151,110	4,589,259	4,068,851	5,393,680	5,440,495	59,883,909
2015-16 kWh	4,587,078	5,384,995	6,225,124	5,070,093	4,304,744	3,915,110	4,406,386	4,785,572	4,429,357	4,302,606	5,484,585	4,921,961	57,817,611

Cost Avoidance by the Numbers: Raw Data



NG Therms Raw Data													
	July	August	September	October	November	December	January	February	March	April	May	June	Total
2010-11 Therms	9,186	9,063	17,531	19,833	42,312	173,528	262,716	225,091	110,177	68,753	18,156	14,626	970,972
2011-12 Therms	7,986	7,664	16,861	18,109	43,899	84,326	140,587	129,839	82,921	21,801	18,990	15,356	588,338
2012-13 Therms	7,991	8,989	20,498	25,880	78,641	121,134	153,490	195,513	174,882	93,772	23,859	16,445	921,094
2013-14 Therms	10,358	12,708	17,929	22,545	56,821	144,325	212,912	220,412	183,353	83,270	22,239	13,415	1,000,287
2014-15 Therms	10,086	11,003	16,221	18,938	59,023	157,388	199,290	241,967	193,129	55,321	20,962	14,661	997,989
2015-16 Therms	7,292	6,260	13,702	25,834	30,993	92,782	166,565	186,289	124,412	36,573	24,129	13,452	728,283

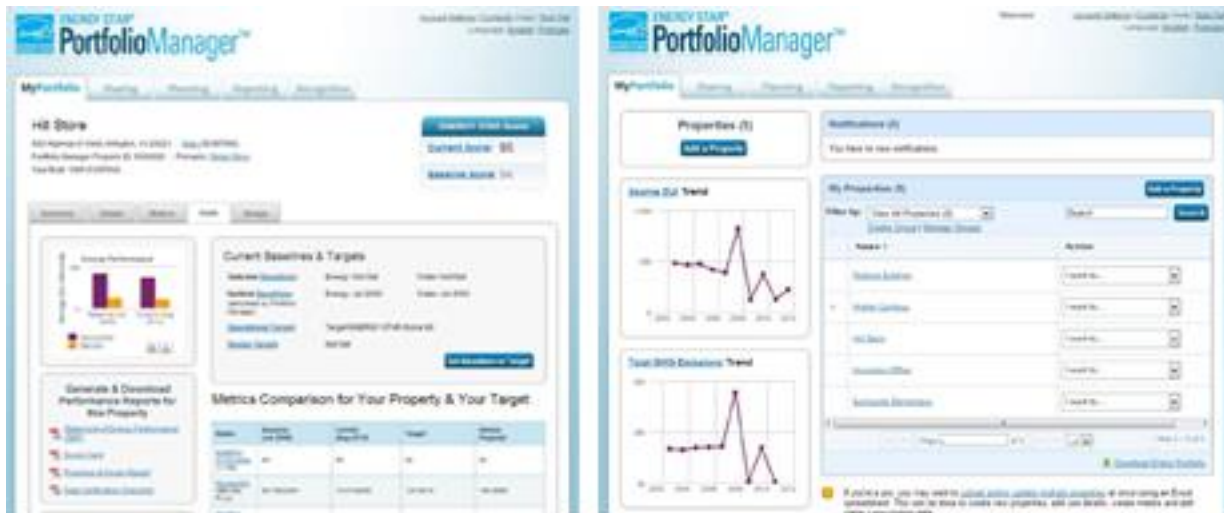
The Way Forward

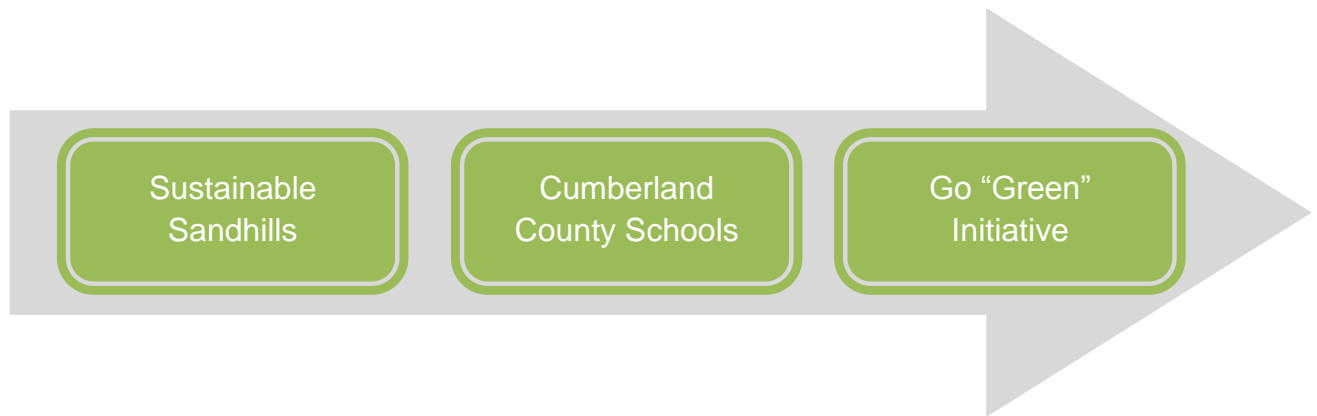
Exciting things are in store for the 2016-2017 school year at CCS.

Cumberland County Schools is proud to announce that they will be rolling out a groundbreaking new energy management platform powered by the Environmental Protection Agency, known as ENERGYSTAR Portfolio Manager.

ENERGYSTAR Portfolio manager is an online tool you can use to measure and track energy and water consumption, waste disposal, as well as greenhouse gas emissions. It can be used benchmark the performance of one building or a whole portfolio of buildings. CCS' portfolio already encompasses 96 facilities and an estimated 700 odd meters!

This platform is expected to prove invaluable as a tool designed to measure and validate current CCS energy efficiency initiatives as well as plan future projects. There are more than 1,000 pieces of data you can pull out of Portfolio Manager, including more than 150 performance metrics.





This publication is printed on 10 percent post-consumer waste fiber. The paper is certified by the Forest Stewardship Council (FSC) and the Green Seal.

50 copies of this public document were printed at a cost of \$7.22 each. Copies of this report are available on the CCS website <http://www.operations.ccs.k12.nc.us/> or www.sustainablesandhills.org or <http://gogreen.ccs.k12.nc.us>



Go Green Initiative

We're a school system of choice and our choice is Green

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FURTHER BE IT RESOLVED that to promote healthier, more environmentally sustainable Board of Education and teach environmental leadership the BOARD hereby:

- 1) Adopts the Go "Green" Initiative as the foundation for its environmental policy...

**THE CUMBERLAND COUNTY BOARD OF EDUCATION
GO "GREEN" INITIATIVE RESOLUTION 2009**