

U.S. DEPARTMENT OF EDUCATION

GreenRibbonSchools

School Nominee Presentation Form

ELIGIBILITY CERTIFICATIONS

School and District's Certifications

The signatures of the school principal and district superintendent (or equivalents) on the next page certify that each of the statements below concerning the school's eligibility and compliance with the following requirements is true and correct to the best of their knowledge. *In no case is a private school required to make any certification with regard to the public school district in which it is located.*

1. The school has some configuration that includes grades Pre-K-12.
2. The school has been evaluated and selected from among schools within the Nominating Authority's jurisdiction, based on high achievement in the three ED-GRS Pillars: 1) reduced environmental impact and costs; 2) improved health and wellness; and 3) effective environmental education.
3. Neither the nominated public school nor its public school district is refusing the U.S. Department of Education Office of Civil Rights (OCR) access to information necessary to investigate a civil rights complaint or to conduct a district wide compliance review. The Department of Defense Education Activity (DoDEA) is not subject to the jurisdiction of OCR. The nominated DoDEA schools, however, are subject to and in compliance with statutory and regulatory requirements to comply with Federal civil rights laws.
4. OCR has not issued a violation letter of findings to the public school district concluding that the nominated public school or the public school district as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan to remedy the violation.
5. The U.S. Department of Justice does not have a pending suit alleging that the public school or the public school district as a whole has violated one or more of the civil rights statutes or the Constitution's equal protection clause.
6. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the public school or public school district in question; or if there are such findings, the state or public school district has corrected, or agreed to correct, the findings.
7. The school meets all applicable federal, state, local and tribal health, environmental and safety requirements in law, regulations and policy and is willing to undergo EPA on-site verification.

U.S. Department of Education Green Ribbon Schools 2015-2018

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

Name of Principal: Mr. Keith M. Trawick

Official School Name: Legacy Elementary School

Official School Name Mailing Address: 165 Pine Grove Road, Madison, Alabama,

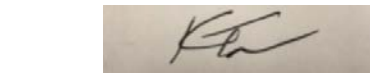
35757 County: Madison State School Code Number *: 0185

Telephone: 256-851-4630

Fax: 256-851-4631

Web site/URL: <http://legacy.mcssk12.org/> E-mail: ktrawick@mcssk12.org

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



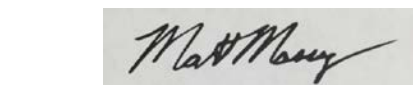
Date: March 23, 2018

(Principal's Signature)

Name of Superintendent: Mr. Matt Massey

District Name: Madison County Schools

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



Date: March 23, 2018

(Superintendent's Signature)



Nominating Authority's Certifications

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

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

Name of Nominating Agency: Alabama Department of Education

Name of Nominating Authority: Mrs. Mary Dansak

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 cursive script that reads "Mary Dansak".

Date: March 23, 2018

(Nominating Authority's Signature)

SUMMARY AND DOCUMENTATION OF NOMINEE'S ACHIEVEMENTS

Provide a coherent summary that describes how your school is representative of your jurisdiction's highest achieving green school efforts. Summarize your strengths and accomplishments in all three Pillars. Then, include concrete examples for work in every Pillar and Element. Only schools that document progress in every Pillar and Element can be considered for this award.

SUBMISSION

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

OMB Control Number: 1860-0509

Expiration Date: March 31, 2018

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.

Alabama State Department of Education Nomination of Legacy Elementary School to 2017-2018 ED-GRS Green Ribbon Schools

Legacy Elementary School Green Ribbon Highlights

The mission of Legacy Elementary School is to create students who Lead by example, Explore with passion, and Succeed in all their endeavors. The faculty provides students with an active, student-centered instructional setting that extends learning beyond the classroom into the world around them using real-life connections. Our philosophy is that children should be given multiple opportunities to develop leadership skills and take ownership of their learning before entering middle school. By incorporating environmental and sustainability education, our students become leaders of their futures and ours as well.

Legacy's Project Pond is one of the largest outdoor classrooms in the state of Alabama. Project Pond is an integral part of everyday life at Legacy. It is utilized by our students every day. Through Project Pond, students learn about and explore the habitats of the many animals that make their home at the pond while also learning how to maintain the pond's natural environment. Pond workdays are set aside as an extension of the school day to build student ownership and environmental responsibility.

As well as providing for direct interaction with their outdoor environment in an educational setting, Project Pond offers students opportunities for leadership. Students who serve on the Student Pond Committee are active in making decisions about the outdoor classroom, and those involved with the Lion Postal Service are tasked with spreading the news. "Big Fish in a Little Pond" is our program created by students, for students. This cooperative project involves our fifth grade students, the Big Fish, in planning, preparing, and delivering standards-based science lesson to younger students, the Minnows, in grades K-4. In both roles, students eagerly become leaders of their own learning.

Our students are proud of Project Pond, and take an active interest in showcasing it to our community through events like Family Reading Night, Math and Science Night, the Special Needs Rodeo, and the Watch D.O.G.S. Dad's kickoff event. Our wheelchair accessible pathway around the pond is lit with luminaries during Family Reading Night, adding an especially beautiful touch to our pond. We welcome wildlife biologists from Alabama Wildlife Federation to our pond every year, where they provide casting and fishing lessons. Each student has the opportunity to earn his or her very own youth fishing license by participating. In fact, all our students have the opportunity to go fishing at Project Pond! These extracurricular activities help foster a lifelong love and appreciation of the beauty and joy of the outdoors and wildlife, and instill a sense of pride in our students of their Project Pond.

Our school leaders demonstrate their dedication to environmental issues and sustainability by seeing that the building and grounds are energy efficient and environmentally friendly. We have switched to low wattage light bulbs, installed aerators on the water faucets, provided water bottle stations in the cafeteria, and will begin the instillation of solar panels this year. We've seen to it that the playground equipment is chromate copper sulfate free, and we take leaks seriously, responding immediately to prevent mold issues.

We work together at Legacy to provide a healthy education. Our school counselors and cafeteria workers collaborate with teachers in educational programs to teach students healthy habits ranging from dietary choices to character education. Our students participate in Healthy Conversations monthly, a program in coordination with the PE teachers and cafeteria workers, by broadcasting through our Student Broadcasting Service to teach students the importance of a variety of food groups in a healthy diet. We collaborate with several outside agencies to provide students a real-life picture of environmental work outside the school. Our 5th graders visit the McDowell Environmental Center where they experience a real "farm to table." Students participate in a Drinking Water Festival at the University of Alabama/Huntsville annually where they learn about the importance of water and our relationship to precious wetlands, ponds, rivers, and other natural water resources. Like many schools, Legacy has an active recycling program. We take it further by visiting the solid waste disposal and recyclery where our waste is incinerated and recycled, and used to power Redstone Arsenal. Our students see and experience the effects of renewable energy firsthand.

We are excited to announce that we have been chosen to participate in GreenpowerUSA's engineering challenge this year! Our team will design, build, test, and race an electric "Goblin" car. This is one way we enhance our learning about sustainability through STEM. We also partner with the Alabama Science, Math, and Technology Initiative, Project Lead the Way, Project WET, and Project WILD to bring STEM to our classrooms while focusing on the environment and sustainability.

We at Legacy are proud of our school and our efforts to be Green! We hope you have enjoyed reading about our leadership philosophy and our actions in this narrative. If you would like to learn more, please see the detailed list of our specific efforts toward the three pillars identified by the U.S. Department of Education Green Ribbon Schools program below.

Legacy Elementary School Green Ribbon Elements in Detail

Pillar 1: Reduce Environmental Impact and Costs

Element 1A: Energy Savings

- District entered a 20 year contract with Schneider Electric in 2015 to help manage energy consumption and greenhouse gas emissions
- District utilizes Schneider Electric's EcoStruxure™ Resource Advisor to monitor energy and water consumption and sustainability data (data included at the end of application)
- LED lighting on all exterior fixtures
- All interior light fixtures replaced with low watt ballasts/bulbs (from 30w to 28w)
- Installed motion sensors on all vending machines to reduce unnecessary energy usage
- Solar panels are being installed on the outdoor classroom pavilion (Spring 2018)
- Use of wind power through windmill as aerator for pond
- Installed controllers on all HVAC units for energy efficient regulation
- School has a blue roof for increased heat reflection
- Participation in EnerNOC (TVA) mandatory shutdowns to reduce energy consumption

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

- Low flush valves installed on all commodes (from 3 gallons per flush to 1.5 gpf)
- Aerated water faucets on all bathroom sinks
- Refillable water bottle stations in cafeteria
- Use of landscaping around building to decrease water runoff
- Use of rain barrels to irrigate raised bed vegetable garden
- Used dirt from low lying area for football field and turned depression into 1.5 acre outdoor classroom with fully stocked, sustainable pond and learning stations including Sensory Garden, Animal Tracking Station, Butterfly Garden, Songbird Sanctuary, Bog Garden, Weather Station, and Frog Pond

Element 1C: Reduced Waste Production

- School-wide recycling program with bins in each classroom
- Use of compost bins at outdoor classroom
- All trash from Legacy Elementary School is sent to Covanta Energy for incineration
- 5th grade students take field trip to Covanta, Solid Waste Disposal Authority and the Recyclery

Element 1D: Use of Alternative Transportation

- GreenpowerUSA Grant Recipient for Goblin Greenpower Car (beginning January 2018)

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

Element 2A: Integrated School Environmental Health Program

- All Madison County School campuses are smoke free
- All playground equipment is chromate copper sulfate free
- Strictly enforced pesticide/cleaning materials policies (after hour only when necessary)
- All leaks are resolved immediately to reduce risk of mold
- All HVAC systems provided by Trane are in full operation
- All air quality controllers are functional and exhibiting highest standard
- Specified classrooms have additional air purifiers as needed

Element 2B: Health and Wellness

- School-wide participation in the Presidential Fitness Award Program
- School-wide participation in the Jump Rope for Heart Program
- School-wide participation in the Boosterthon Fun Run
- Legacy hosts the Attack of the Lions 5K annually
- 3rd – 5th grade students participate in running club and feeder pattern track meet
- 4th – 5th grade participation in the National Archery in the Schools Program
- Students tend eight raised-bed vegetable gardens, herb garden
- 5th grade students visit McDowell Environmental Center annually. Lessons here focus on energy, community, adaptations, connections, cycles, and systems of the earth. The *Down to Earth* class, for example, focuses on the impact of a reclaimed coal mine on local ecosystem. Discussions include the responsible use of our natural resources. During meals at the McDowell Environmental, students experience “farm to table,” a concept they explore in their school through Project Pond.
- School-wide mandatory PE for 30 minutes daily
- K-2 has scheduled recess for 30 minutes daily, and 3-5 for 15 minutes daily
- Staff participates in Scale Back Alabama annually
- Annual staff wellness screenings conducted by Alabama Department of Public Health
- Collaboration between Cafeteria Manager and PE teacher to incorporate “healthy conversations” monthly. Tips and information about the importance of different food groups and a healthy diet are broadcast on our Student Broadcasting Station and in PE classes.
- Weekly guidance lessons from counselor oftentimes pertain to physical and mental health, as well as character education
- Groovy Girls Character Education Club for 5th grade girls
- Character Counts, Character Education Club for 5th grade boys
- School-wide participation in anti-bullying program with Madison County Sheriff’s Department (SAFE2TELL)
- School-wide participation in No Place for Hate anti-bullying program activities

Pillar III: Provide Effective Environmental and sustainability Education, Incorporating STEM, Civic Skills, and Green Career Pathways

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

- School-wide implementation of Project Lead the Way Launch, an engineering program
- Grade level implementation of Project WET and Project WILD, environmental programs
- Development and implementation of outdoor classroom curricula with April Waltz, Alabama Outdoor Classrooms program
- All lessons designed for Project Pond focus on Environmental Literacy Strand 1: Questioning, Analysis, and Interpretation Skills. Others focus on knowledge of the environmental process, the earth, environment and society, and personal and civic responsibility.
- Project Pond activities are all tied to specific grade levels. The raised bed vegetable garden is dedicated to Kindergarten, 5th grade, and special needs students. Other learning stations like the herb garden, song bird sanctuary, animal tracking station, and butterfly gardens are assigned to other grade levels. These assignments carry over into the maintenance schedule and can be rotated from year to year.
- “Big Fish in a Little Pond” focuses heavily on Strand 4: Personal and Civic Responsibility as student leaders in our school educate the “minnows” on our environmental footprint and processes.
- 4th grade students attend the Drinking Water Festival hosted by the University of Alabama-Huntsville annually. Here students learn about surface and groundwater, where their water comes from, how to keep it clean, and how to protect it. They also learn how their drinking water is related to wetlands, forests, and wildlife, and the importance of our relationship to these natural resources.
- Legacy Farmers Market held 2-3 times per year (proceeds go to Project Pond)
- Partnerships, current and past, include: AMRDEC STEM Education Outreach Program; Alabama Outdoor Classroom Program; Alabama Wildlife Federation; Alabama Cooperative Extension System, Alabama Department of Conservation and Natural Resources-Aquatic Education Division and Fisheries and Aquatic Biodiversity Center; Alabama A&M University-Forestry, Ecology, and Wildlife Program; Environmental Education Association of Alabama, Alabama Math, Science, and Technology Initiative; Legacy-Partners in Environmental Education; McDowell Environmental Center; Huntsville Botanic Gardens; Tennessee Valley Master Gardener Association; Home Depot Volunteers and other retail stores; Boy Scouts of Alabama; Local Legislators/State Representatives

Element 3B: Use of the Environment and Sustainability to Develop STEM Content Knowledge and Thinking Skills

- Legacy was recently selected to participate in the Greenpower USA program; 5th graders will build and race an electric car (“Goblin Car”). Working on a team, students will design their car to compete in a race. Additionally, the team will develop a presentation and be able to describe the construction process from start to finish on race day, as well as compete with other schools to race the car. Goblin cars compete for speed on a race track, and compete on an obstacle course as well.
- Volunteers from Redstone Arsenal (via Aviation and Missile Research, Development and Engineering Center-AMRDEC) visit on a monthly basis to discuss STEM related jobs, often relative to environmental and sustainability issues like civil engineering

- Students solve mathematical problems to determine how much water is needed for the raised bed vegetable gardens using rain barrels (Project Pond). These include determining volume and psi (water pressure), a direct link between content, thinking skills, and environmental stewardship.
- 3rd and 5th grade student scores on state standardized science assessments are consistently at or near the top in the district since the opening of Project Pond

Element 3C: Civic Skills and Green Career Pathways

- Students learn about career opportunities when visiting Coventa Energy, a field trip sponsored by Operation Green team, a community service organization through the City of Huntsville
- Stakeholders and business partners from the community are invited to serve during our outdoor classroom workdays to show unity and collaboration among our students, staff, and community; students are exposed to a variety of environmental jobs through the people they meet.

Madison County Schools – Legacy Elementary School Green Ribbon Application

Information provided by: Schneider Electric

Element 1A: Energy Savings

- *(Describe the school's plan to manage reduce energy use, and include data to show improvement. Include the use of ENERGY STAR Portfolio Manager or other similar tool.)*

Through our Partnership with Schneider Electric, Madison County Schools has been able to improve all their schools across the entire District. Specifically, at Legacy Elementary School a Building Automation System, Lighting and Control Retrofits (T-12 to T-8 and LED exterior lighting), Water Retrofits, and Computer Enterprise Management have been installed.

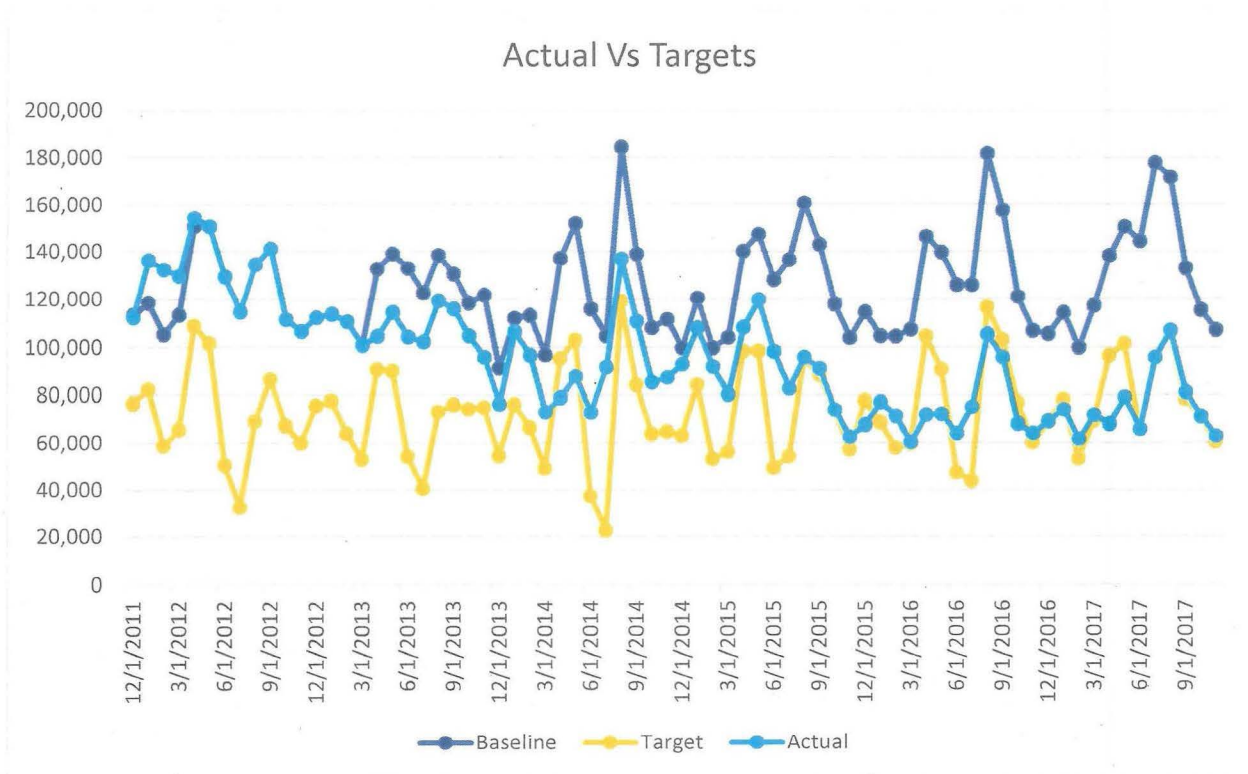
The District can monitor these new energy conservation measures (ECMs) through Resource Advisor, Schneider Electric's enterprise-level software application that provides you with secure access to data, reports and summaries to drive your energy and sustainability programs. The District's plan to manage and reduce their energy consumption through these ECMs are listed below.

1. BAS – The BAS will control the chilled water and hot water plants through direct digital control with optimized sequences of operations. Controllable zones will be programmed for temperature setup and temperature setback, along with unoccupied dew point setup monitoring. Daily scheduling, holiday scheduling, and exception scheduling capabilities for each control zone will be provided. This will allow the building to be conditioned when needed for the occupants. When the building is not being used for its primary purpose, the building will be able to be setback to a more energy efficient temperature zone.
2. Lighting and Control Retrofits – Schneider Electric replaced all T-12 lamps to an upgraded T-8 lamp fixture. Where a typical T-12 lamp uses 34 watts per lamp, an upgraded T-8 fixture uses only 28 watts per lamp while improving light levels and quality. The exterior lightening was replaced to from HID luminaries to LED luminaries. The lighting circuits were removed from their outdated timers and placed in zones and scheduled through the BAS.
3. Water Retrofits – Legacy already had many low consumption water fixtures in the building. Through the Schneider Electric energy project, the remaining high consumption water fixtures were replaced with low consumption fixtures. These areas were the urinal flush valve (1.5gpf valves converted to 0.5gpf valves).
4. Computer Enterprise Management – the Joulex/Cisco Energy Management Suite software is used to schedule all computers assigned in the software (~7000 devices across the District). This will allow the District and all the schools to turn off the computers when the building is unoccupied in the evenings and school breaks.

- **(Describe how the school has reduced its total energy use from an initial baseline. (M&V))**

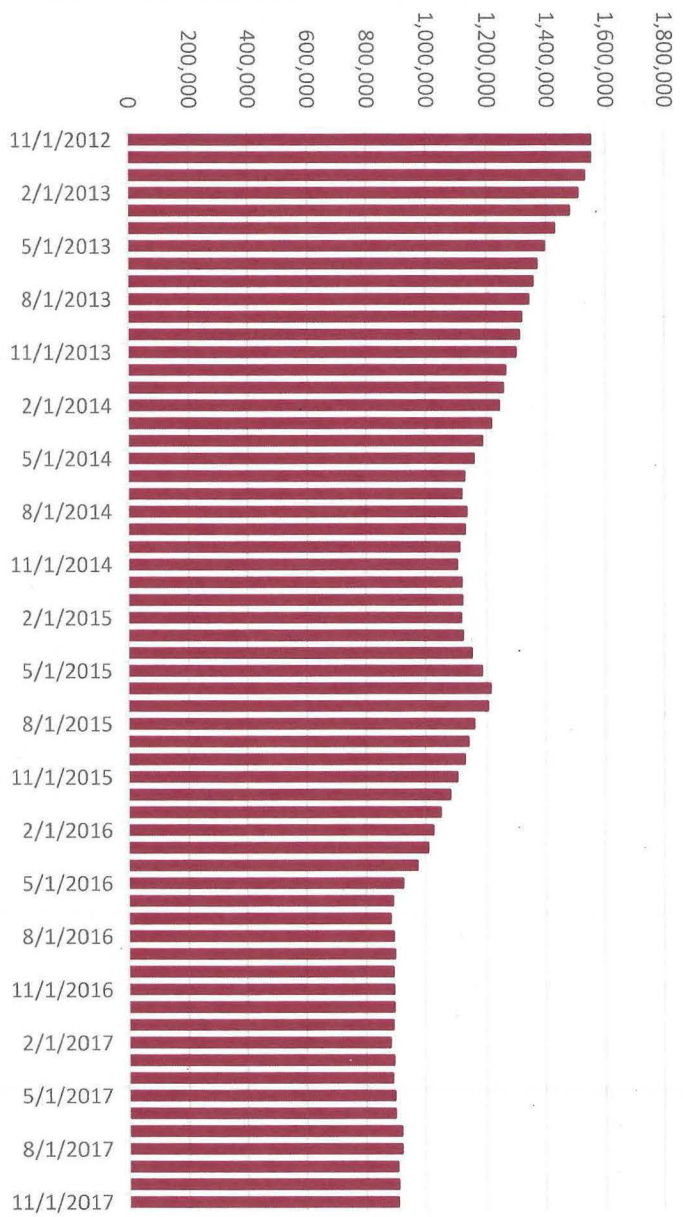
Schneider Electric used the used "Option C – Whole Facility (Main Meter Measurement)" as described in the International Measurement and Verification Protocol (IPMVP Volume I, EVO 10000-1:2010). By using those standards and weather data from the National Weather Service Station at Huntsville, AL, Schneider Electric can accurately show the District's energy savings through the new ECMs that were installed. Through Resource Advisor Madison County Schools can actively monitor their school's electrical consumption. The graph below shows Legacy Elementary School's kwh usage from December 2011 to November 2017.

- Actual – Current kWh usage seen on the bills
- Target – School's energy savings goal (kWh) from the energy project conducted and the ECMs installed.
- Baseline – Predicted energy usage (kWh) without the energy project ECMs, calculated through a linear regression that considers variables such as weather and number of occupied days per billing cycle

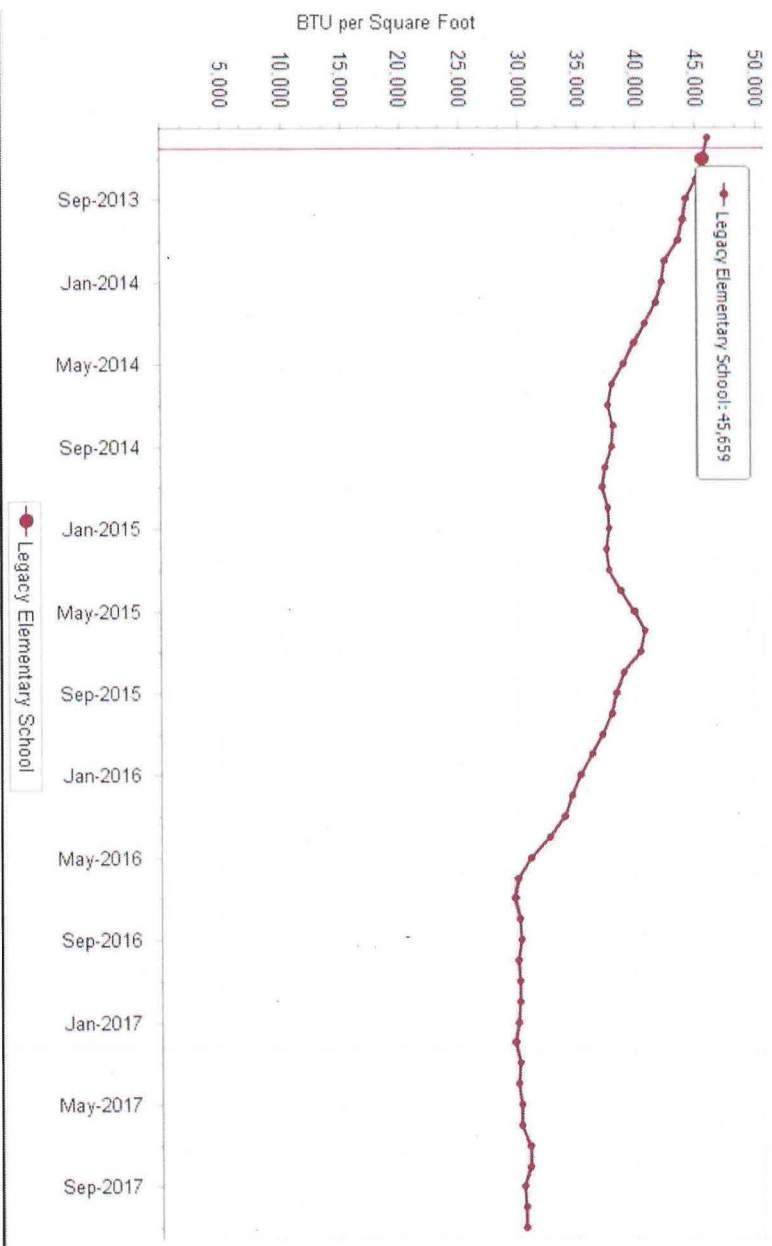


The following chart illustrates the reduction in the 12-month total consumption over time. Each bar represents an annual usage value (the sum of the current month and the 11 preceding).

12 Month Running kWh



All Areas - 12 Month Running Annual BTU per Square Foot



- ***(Describe the reduction in greenhouse gas (GHG) emissions.)***

District wide, Madison County Schools has been able to have a positive change in its environmental impact for the region. Since October 2013, Legacy Elementary School has been able to save 2,110,903 kWh. Below breaks down the environmental impact for a given year.

Legacy Elementary
Environmental Impact
through Dec 2017



Tons of CO2 1,583



Cars for a Year 317



Acres of Trees 431

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

- ***(Brainstorm with your team for other ways you are improving your use of water and school grounds.)***

Through the energy project with Schneider Electric, Madison County Schools had an ECM focused on water conservation. Legacy Elementary School already had many low consumption water fixtures in the building. Through the Schneider Electric energy project, the remaining high consumption water fixtures were replaced with low consumption fixtures. These areas were primarily in the urinal flush valve (1.5gpf valves converted to 0.5gpf valves) and all sinks with new 0.5gpm flow restrictors. Dish sprayers and pedal valves were install in the kitchen facilities to reduce the mass consumption. Due to the already energy efficient water fixtures at Legacy Elementary School savings Schneider Electric was only able to retrofit the remain inefficient fixture to achieve an annual of \$433 in water and gas (for hot-water-heaters) savings. These savings were calculated in one-for-one changeouts from what the old fixture was consuming and the new fixtures manufacture documentations.