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EXECUTIVE SUMMARY

One of Claflin University’s long-range strategic plans is to develop a sustainability initiative that encompasses four major areas: greening projects, advocacy, teaching and research, and construction/facilities. The sustainability taskforce committee was formed to devise a comprehensive sustainability plan.

The committee solicited responses from colleagues for an internal assessment of initiatives in the areas mentioned above which revealed the following. Greening projects included mainly community service and recycling projects. The major advocacy project involved raising sustainability awareness during Earth Day by the Friends of the Earth organization. Teaching focused on improvements to laboratory courses that resulted in reduced use of toxic chemicals whereas the major research projects revolved around biofuels and bioremediation. With regard to facilities, the main areas focused on using least toxic chemicals and increasing energy efficiency to reduce electric costs. A review of peer institutions found similar sustainability projects that focused on recycling programs, improving energy efficiency, and obtaining Leadership of Energy and Environmental Design (LEED) certification for construction and renovations.

Based on the internal assessment, peer review, and subcommittee findings, recommendations were made for each area. A major greening project is to support and extend the fledgling recycling program into all buildings on campus. For the teaching area, it is recommended that sustainability concepts be introduced during freshmen and/or sophomore orientation and/or assembly, students take part in determining their carbon footprint, and a cross disciplinary minor in sustainability studies be developed. Since the green research projects focus on biofuels and bioremediation, it is recommended that commonalities among the projects be identified and used as a theme for developing programmatic proposals. For facilities management, the University should seek LEED certification for new construction and renovations and determine the energy usage and carbon emissions for every building to prioritize which buildings should be targeted for upgrades that will increase energy efficiency. To ensure that the initiatives are being implemented, students who belong to the Friends of the Earth organization will serve as advocates for the projects. In addition, two promising students will receive additional training as Green For All Ambassadors so as to take a leadership role in the development and execution of the specific campus sustainability projects.
INTRODUCTION

Sustainability as defined by the United States Environmental Protection Agency refers to “policies and strategies that meet society’s present needs without compromising the ability of future generations to meet their own needs” (http://www.epa.gov/sustainability/basicinfo.htm). Meeting those needs requires preservation of natural resources that are being depleted and development of alternatives that have a little or no impact on the environment. To address the role that Claflin University will have in this effort, the University proposed as a part of its Strategic Plan “Envisioning Greatness” to “establish and implement a university-wide environmental sustainability initiative that will include teaching and research, campus greening projects, environmentally responsible construction and advocacy that furthers public awareness”.

SUSTAINABILITY TASKFORCE COMMITTEE

The Sustainability Taskforce Committee was established to assess the sustainability efforts of the University and develop a plan that addresses teaching and research, campus greening projects, construction and advocacy. The committee is composed of a cross section of faculty, staff, and students from across the campus (Table 1). During the first meeting, subcommittees were formed to address specific areas of the initiative: facilities, teaching, research, and advocacy. The entire committee contributed to the greening projects area; out of those discussions, a recycling subcommittee was formed to address waste management campus wide. Subcommittee reports and meeting minutes were shared with the committee through blackboard.
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Randall H. Harris, Committee Chair</td>
<td>Assistant Professor, Department of Biology</td>
</tr>
<tr>
<td>Mr. Jason Tate</td>
<td>General Manager, Claflin Dining</td>
</tr>
<tr>
<td>Dr. Harpal S. Grewal</td>
<td>Dean, School of Business</td>
</tr>
<tr>
<td>Mr. Drexel B. Ball</td>
<td>Executive Vice President</td>
</tr>
<tr>
<td>Dr. Mohammed K. Chowdhury</td>
<td>Associate Professor and Chairperson, Department of Biology</td>
</tr>
<tr>
<td>Mr. Habibur Rahman</td>
<td>Associate Professor, Department of Art</td>
</tr>
<tr>
<td>Mr. James Brenn</td>
<td>Assistant Vice President, Information Technology</td>
</tr>
<tr>
<td>Dr. Olanrewaju Johnson</td>
<td>Associate Professor, Department of Biology</td>
</tr>
<tr>
<td>Ms. Marilyn Y. Gibbs</td>
<td>Director, HV Manning Library</td>
</tr>
<tr>
<td>Dr. Camelia Kantor</td>
<td>Assistant Professor, Department of History and Sociology</td>
</tr>
<tr>
<td>Mrs. Florence Anoruo</td>
<td>Assistant Professor, Department of Biology</td>
</tr>
<tr>
<td>Mrs. Sonja A. Bennett</td>
<td>Assistant Vice President, Communications and Marketing</td>
</tr>
<tr>
<td>Mrs. Tara H. Saracina</td>
<td>Assistant Professor and Chairperson, Department of Accounting</td>
</tr>
<tr>
<td>Mr. Mike Dunnavant</td>
<td>Director, Sodexo Services</td>
</tr>
<tr>
<td>Dr. Courtney A. Howard</td>
<td>Associate Professor and Chairperson, School of Education</td>
</tr>
<tr>
<td>Dr. Muthukrishna Raja</td>
<td>Associate Professor, Department of Chemistry</td>
</tr>
<tr>
<td>Mr. James R. Payne</td>
<td>Assistant Vice President, Student Development and Services</td>
</tr>
<tr>
<td>Ms. Wilda J. Robinson</td>
<td>Director, Academic Student Support-GEAR UP</td>
</tr>
<tr>
<td>Ms. Carolyn Snell (Rep. for Dr. Leroy A. Durant)</td>
<td>Director, Career Development Center</td>
</tr>
<tr>
<td>Mr. J. deLeon McDuffie (or Rep)</td>
<td>Vice President, Fiscal Affairs</td>
</tr>
<tr>
<td>Dr. George E. Miller, III (or Rep)</td>
<td>Vice President, Academic Affairs</td>
</tr>
<tr>
<td>Mr. Lee Morris, III</td>
<td>Sophomore, Biochemistry</td>
</tr>
<tr>
<td>Ms. Ezinne Mong</td>
<td>Junior, Biology, Friends of the Earth</td>
</tr>
<tr>
<td>Ms. Brittany Lockhart</td>
<td>Junior, Mass Communication, Pan-Hellenic Council</td>
</tr>
<tr>
<td>Mr. Solomon Young</td>
<td>Junior, Mass Communication Major, Mister Claflin</td>
</tr>
</tbody>
</table>
INTERNAL ASSESSMENT

An internal assessment was performed to determine the extent to which the University was participating in any sustainability activities. Committee members forwarded an information request and fillable spreadsheet to colleagues and staff in their respective areas. The compiled information is presented in Appendix A and is summarized below.

Greening Projects: The main projects revolved around community service and recycling programs performed by the Friends of the Earth (FOE) student organization (Mrs. Florence Anoruo, faculty advisor). The recycling programs focused on paper, bottle, cardboard, ink cartridges, and aluminum and waste was transported to local recycling centers. The community service involved adopt-a-highway cleanups and raising awareness among students on campus about sustainable living.

Advocacy: Students in FOE held an Earth Day Celebration (April 2011) by hosting a week long set of activities including movie and round table discussion on sustainability and natural resource conservation, Earth Day Quiz-a-Thon, and an Earth Day walk.

Facilities: Responses focused primarily on operation and maintenance of existing facilities to reduce energy consumption (e.g., conversion to electronic ballasts) or exposure to potentially toxic chemicals (e.g., use of paints with low volatile organic compounds). In addition, plans are underway for installation of solar powered heating/cooling systems in two dormitories.

Teaching and Research: Sustainability practices in teaching focused mainly on improvements to the general and organic chemistry lab curricula designed to reduce the use of toxic chemicals and increase the use of or development of non-toxic chemicals. The research projects fell into two broad categories: biofuels and bioremediation. The biofuel projects focus on either improving the pesticide and temperature tolerance of feedstock, designing chemicals for fuel cells, or devising chemical reactions to improve the biofuel output from feedstock. The bioremediation projects focus on the use of agricultural products for removal of environmental pollutants or using acoustics to drive bacteria capable of bioremediation through porous substances.
A peer institution survey was conducted to determine the sustainability activities of equivalent institutions with respect to categories identified in Claflin’s initiative. The information was retrieved from www.greenreportcard.org. The Office of Planning, Assessment, and Information Services provided a list of ten institutions (Appendix B, Table 2) and information was gathered for three schools (Carthege College, Spelman College, and Wofford College). The detailed information is presented in Appendix B. All three colleges have recycling programs for used cooking oil, electronics, plastics, and/or paper. Wofford and Spelman conducted greenhouse gas emission inventory to inform their decisions on renovations and/or upgrades. Facilities considerations include energy efficient upgrades (e.g., energy efficient fluorescent bulbs, low flow water fixtures, daylighting, occupancy sensor lighting, etc) and Leadership of Energy and Environmental Design (LEED) certification for new construction or renovations. Each campus has student involvement to varying degrees from designated student sustainability representatives that act as advocates to student-led campus wide sustainability projects.

**RECOMMENDATIONS**

Below are the recommendations based on the internal assessment, external survey, committee reports, and group discussions.

**Greening projects:**

1. Expand the existing recycling program to include paper, plastic, aluminum, and cardboard. Recycling bins for paper, plastic, and aluminum will be placed in designated locations in every building on campus. Outdoor recycling bins for cardboard will be placed in strategic locations near the dormitories on campus. A local waste management company (e.g., Sunoco Recycling) will be responsible for waste removal from campus.

2. End of semester reduce, recycle, reuse campaign. At the end of each semester during student move-out when the campus waste is greatest, students will be encouraged to dispose of items in designated recycling bins. In addition, non-perishable food items, clothing, electronics, furniture, etc., will be collected for donation to local shelters, food banks, etc.

3. Transform the Claflin campus lawns into xeriscaped yards by planting only plant species that use little water and retain rainwater for longer periods to reduce water usage.
Teaching and research

1. Introduce a sustainability module into the freshmen and sophomore orientation and/or assembly courses. The module will expose students to the concept of sustainability, assess students’ interest and knowledge of sustainable activities, and recruit (primarily for Friends of the Earth) for campus wide projects including the recycling program (see greening projects) and energy usage and carbon emissions inventory (see facilities). Students will be asked to assess their carbon footprints and given recommendations on how to reduce them.

2. Develop a minor in sustainability studies that emphasizes ethical and historical perspectives, social justice, economic empowerment, and environmental stewardship. The nature of the subject matter will require that the courses be complementary and be offered by different schools or departments across campus.

3. Permit students to develop research projects from data being collected for various sustainability initiatives (e.g., surveys of student sustainability attitudes, efficiency studies pre and post upgrades, impact of recycling program, etc.)

4. Identify a common theme among existing green research projects around which to develop programmatic proposals.

5. Apply for the i6 Green Challenge Grant (http://www.eda.gov/PDF/i6GreenFFO.pdf) to create a “proof of concept” center for green technology-led economic development. The proposal would create a technology transfer office for renewable and/or efficiency projects developed on and off campus.

Advocacy

1. Select two students to be trained as ambassadors for Green For All (www.greenforall.org). Green For All is an organization that is promoting inclusiveness in the new green economy. Green For All’s College Ambassador Program will provide a focused vehicle to cultivate young, green economy champions through educational workshops and campus-based projects at Historical Black Colleges and Universities. Green For All has made a formal request for two student ambassadors from Claflin University as well as from 14 other HBCUs (see Appendix C). These ambassadors will work with students that are members of Friends of the Earth to serve as advocates for initiatives across campus. The ambassadors and members of Friends of the Earth can assist with planning and execution of programs.

2. Create a focused advertising campaign to highlight the sustainability initiatives and research projects on campus.

3. Generate campus and public support through Earth Day celebrations. The celebration will include community workshops where participants will be guided in preparing an energy audit for their homes.

4. Affirm the University’s commitment to sustainability by requesting that President Tisdale sign the American College and University Presidents’ Climate Commitment (http://www.presidentsclimate-commitment.org/).

5. Create a green campus blog linked to Claflin’s Facebook page to promote environmental awareness and allow sharing of ideas.
Facilities

1. Determine the energy usage and carbon emissions for each building on campus. This information will spotlight those buildings that have the highest energy demands.

2. Require that the campus purchase Energy Star products when available and replace inefficient campus appliances with Energy Star products.

3. Require that the University initiate a “turn out the lights” campaign for unoccupied rooms in every building on campus. Public safety can be recruited to turn off the lights during their nightly walk-throughs.

4. Replace vehicles that are retired from the fleet with hybrid or electric vehicles.

5. Perform a hard shutdown of University during extended holiday breaks. All non-essential electric equipment and devices will be turned off or unplugged.


7. Apply for Second Nature’s Advancing Green Building in Higher Education fellowship (http://www.secondnature.org/AGBfellowships.html). The fellowship provides travel expenses for administrative officials at Title III/V institutions to attend a conference for planning green building projects.
## GREENING PROJECTS

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Student Involvement</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Paper Recycling Program</strong></td>
<td>Recycling bins placed at major administrative offices and departments</td>
<td>Students take out bins to strategic locations for pick up by city recycling trucks.</td>
<td>2002-present</td>
</tr>
<tr>
<td><strong>Bottle and Cardboard Recycling</strong></td>
<td>Hundreds of plastic, and aluminum cans, and cardboard boxes are picked up by faculty advisor with the help of Friends of Earth (FOE) members on designated days of the week and taken to recycling center.</td>
<td>FOE members help with loading and off loading the bottles</td>
<td>2005-present</td>
</tr>
<tr>
<td><strong>Adopt-A-Highway</strong></td>
<td>Claflin University Friends of Earth has adopted St. Mathews Highway since 2001.</td>
<td>Each year FOE members and their advisor clean the entire length of the highway during the Spring and Fall.</td>
<td></td>
</tr>
<tr>
<td><strong>Recycling of Empty Ink Cartridges</strong></td>
<td>FOE members also pick up empty ink cartridges for recycling</td>
<td>Students are assigned to pick up the cartridges from different offices.</td>
<td>2008-present</td>
</tr>
<tr>
<td><strong>Paperless Advising</strong></td>
<td>Academic Advising Files for the Department of Biology will be kept in an electronic format. All current paper files will be scanned and maintained in an ACCESS database and/or as Word files. All registration forms will be completed online. Students will be allowed to use the advising office laptop computer to complete forms. Only forms requiring signatures will be printed. Records of these printed forms with signatures will be scanned and maintained in the student database. The Department of History and Sociology will implement a similar strategy.</td>
<td>No students will be involved in this transformation due to the sensitivity and confidentiality of student information. Students will have to be conditioned to seeking necessary forms online and using the laptop computer to complete forms.</td>
<td>Anticipated Implementation date is August 2012.</td>
</tr>
<tr>
<td><strong>Newspaper recycling</strong></td>
<td>HV Manning Library recycles old newspaper</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Trayless cafeteria</strong></td>
<td>The cafeteria is trayless which reduces water costs during clean up of dishware as well as food waste since customers put less food on a plate than on a tray. Generally no paper or foam products are used for campus wide food events. However, exceptions are made where appropriate (eg., campus cookouts); in those instances, recycled paper products are used.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Claffin dining use of locally grown produce</strong></td>
<td>Claffin Dining uses when appropriate produce from S.C. growers referred to as Field to Plate. This reduces food spoilage and shipping costs which cut the overall food costs and provides fresher food for the customers. The program was established through a contract between Sodexo and the food distributor SysCo.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Recycling of used cooking oil</strong></td>
<td>Claffin Dining generates about 70 gallons of used vegetable oil every two weeks. The oil is collected by Carolina Byproducts which recycles the oil for animal feed or biodiesel</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Organic Chemistry Labs</strong></td>
<td>Designing safer chemicals and products. Designing chemical formulation to prevent waste and no waste to clean up.</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Friends of the Earth</strong></td>
<td>Determine individual carbon footprint</td>
<td>Members of FOE</td>
<td>Spring 2011</td>
</tr>
<tr>
<td><strong>IT</strong></td>
<td>IT plans to drastically reduce server usage which will reduce cooling, maintenance, and electric costs. Also IT plans to begin recycling old computers through a third party vendor.</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>
## Academics

<table>
<thead>
<tr>
<th>Course Name/Prefix</th>
<th>Description</th>
<th>Target Major</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic/Teaching: Uses indigenous non corrosive and household chemicals (materials) as a cleansing compound to be fully effective, yet have a little or no toxicity. This have been demonstrated by mixing olive oil and lemon juice, by dissolving vinegar into water and used as window glass cleaner and furniture stain remover. Teaching the technique in removing stains in clothes like blood or sauce by applying baking soda instead of hazardous or strong chemicals products used sold in the market.</td>
<td>Freshmen and Junior College students of Denmark Technology</td>
<td></td>
</tr>
<tr>
<td>Chem 121 Lab, Chem 122 lect/ Lab; Chem 101 (CE)</td>
<td>Edited Claflin Chemistry manual and designed experiments using safer chemicals and products.</td>
<td></td>
</tr>
<tr>
<td>CHEM232</td>
<td>Eliminate hazardous chemicals in the experiment such a mercuric compound and reduced the amount of chemical used per lab session.</td>
<td></td>
</tr>
<tr>
<td>CHEM 232-01 &amp; 232-02</td>
<td>The development of green organic chemistry laboratory program at Claflin University, culminating in the complete replacement of the organic chemistry laboratory sequence with a greener curriculum. For example the bromination of alkene in done by adding elemental bromine which is volatile and highly corrosive, causing severe burns upon contact with the skin and extremely irritating upon inhalation. An alternative green method is adopted by using pyridinium tribromide. This method provides the slow release of bromine in the reaction medium. This makes the environment clean.</td>
<td></td>
</tr>
</tbody>
</table>

## Research

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Description</th>
<th>Date</th>
<th>Student Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Next Generation Biofuels Research and Development (DARPA)</td>
<td>Development of cold-tolerant sugarcane (Chowdhury)</td>
<td>8/1/2010 - 7/31/2012</td>
<td>Ashanti Calender and Cassandra Newkirk</td>
</tr>
<tr>
<td>Next Generation Biofuels Research and Development (DARPA)</td>
<td>We are exploring the possibility of converting C4 organic compounds, like butanol and butyric acid, to C12 –C14 oxygenated fuels. Our strategy is to convert C4 compounds to stable and environmentally benign compounds using green chemistry methods and then converting the intermediate to oxygenated fuels. We are also planning to study the mechanism of these reactions. Understanding the mechanism of these reactions will enable us to develop cost efficient methods to produce oxygenated fuels from bio-feed stocks. (Raja)</td>
<td>8/1/2010 - 7/31/2012</td>
<td></td>
</tr>
<tr>
<td>US-Egypt Joint Science and Technology Grant</td>
<td>Development of sugarcane with improved water-use efficiency and pest resistance (Chowdhury)</td>
<td>8/1/2011 - 7/31/2014</td>
<td>yes</td>
</tr>
<tr>
<td>Claflin University Program for Research Infrastructure Improvement (DOE)</td>
<td>Environmental Remediation of Mercury, Chromium, and Chlorinated Solvents at DOE Sites Utilizing Highly Characterized Peats and Agricultural Industry Waste Products. (Rizzuti and Harris)</td>
<td>4/17/2010- 4/6/2013</td>
<td>Yes (undergraduate and graduate)</td>
</tr>
<tr>
<td>Claflin University Program for Research Infrastructure Improvement (DOE)</td>
<td>An exploratory research with the objective of establishing the feasibility using low-frequency acoustic energy for mitigating bacterial adsorption and filtration in porous media (Johnson)</td>
<td>4/17/2010- 4/6/2013</td>
<td>Yes (undergraduate and graduate)</td>
</tr>
<tr>
<td>Synthesis of Chalcogenides and Oxychalcogenides</td>
<td>Synthesis of Chalcogenides and Oxychalcogenides as potential visible-light photocatalysts for the production of hydrogen from water. the project has the potential to transform current energy use to more sustainable forms (Iyer)</td>
<td></td>
<td>Yes (undergraduate)</td>
</tr>
</tbody>
</table>
### FACILITIES

<table>
<thead>
<tr>
<th>Building</th>
<th>Design, New Construction, Renovation, Operation, Maintenance</th>
<th>Campus Location (if new)</th>
<th>Description</th>
<th>‘Green’ Supplier/Manufacturer/Contractor</th>
<th>Certification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus wide</td>
<td>Maintenance</td>
<td></td>
<td>Use of paints with low volatile organic compounds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Campus wide</td>
<td>Maintenance</td>
<td></td>
<td>Changing from mechanical to electric ballasts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Campus wide</td>
<td>Maintenance</td>
<td></td>
<td>Use of GE fluorescent bulbs</td>
<td></td>
<td></td>
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<tr>
<td>Duton Hall</td>
<td>Operation</td>
<td></td>
<td>Tankless hot water system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Campus Wide</td>
<td>Maintenance</td>
<td></td>
<td>Green qualified cleaners</td>
<td>Eco-Lab</td>
<td></td>
</tr>
<tr>
<td>Solar system for Dormitories</td>
<td>Construction/renovation</td>
<td></td>
<td>Claflin will install a solar powered heating/cooling system for two dormitories</td>
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### ADVOCACY

<table>
<thead>
<tr>
<th>Description</th>
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<tbody>
<tr>
<td>Environmental Awareness and Sustainable Conservation Education by Friends of the Earth (FOE) through movies, seminars, invited guest speakers, and community outreach programs educates students about practicing sustainable life styles and making Claflin a greener campus. 2001-present</td>
<td></td>
</tr>
<tr>
<td>Students in FOE held an Earth Day Celebration by hosting a week long activities including movie and round table discussion on sustainability and natural resource conservation, Earth Day Quiz-a-Thon, and an Earth Day walk.</td>
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</tr>
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Appendix B

Carthage College

Carthage has sought to pursue responsible practices in construction, landscaping, energy use and recycling to contribute to a cleaner, sustainable environment. Those efforts included using recycled products whenever feasible, using environmentally friendly cleaning supplies and reducing construction waste by 70 percent. The name of the sustainability project is the red, white, and green movement.

Building Materials and Maintenance

- Most floors at Carthage are Forbo Marmoleum. Marmoleum is made with natural ingredients, contains no harmful VOCs or other toxic chemicals, and is installed with solvent-free adhesives or no adhesive at all. It has no adverse health effects during production, installation, use or disposal, and has been certified as a sustainable product.
- All new carpeting at Carthage must be at least 35 percent recycled content. Entrance mats in all buildings were made with recycled rubber materials. Lighting on campus is energy-saving.
- The College utilizes compact fluorescent bulbs and high efficiency fluorescent lighting.
- Exit signs are LED, consuming less energy.
- The College uses only zero- or low-VOC paint.
- Low-flow water fixtures are used.
- Furniture in residence halls is made from sustainable plantation-grown wood, not primary first-growth timber or non-plantation grown teak.

Construction/Renovation

- New and renovated campus buildings incorporate methods to reduce energy consumption, including day lighting, occupancy sensor lighting controls and demand-controlled ventilation systems.
- The new Student Union has been designed to be 29.8 percent more energy-efficient than the average Wisconsin building. In addition to day-lighting, occupancy sensor lighting controls, demand-controlled ventilation and other Carthage building standards, the student union will feature a rain garden to manage storm water.
- The College recycles building materials whenever possible. 85 percent of the former Siedemann Natatorium materials will be recycled as the building is renovated into the new Student Union, including $6,000 worth of aluminum from the former swimming pool.
- Building Information Management technology is used in all construction projects. BIM allows architects, engineers, builders and campus officials to see a 3-D model of a building, leading to improved accuracy, fewer change orders, and less construction waste. Designing buildings in three dimensions instead of two has reduced construction waste by an estimated 70 percent and change orders by an estimated 80 percent.
- Permeable asphalt on campus allows rainwater to seep through the surface into the ground, instead of being carried into drainage systems. Rainwater permeates the asphalt and runs off in collectors under the street, allowing for natural filtration and cleansing of pollutants, and reducing the number of pipes and inlets that must be places in tree root zones.
- Construction materials are purchased locally whenever feasible to reduce energy used for transportation.
- The white roofs of Tarble Athletic and Recreation Center and Tarble Arena were designed to reflect heat and save energy.

<table>
<thead>
<tr>
<th>Austin College</th>
<th>Rhodes College</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carthage College</td>
<td>Spelman College</td>
</tr>
<tr>
<td>John Brown University</td>
<td>Wofford College</td>
</tr>
<tr>
<td>Millsaps College</td>
<td>Taylor University</td>
</tr>
<tr>
<td>Morehouse College</td>
<td>Presbyterian College</td>
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</table>
Recycling and Waste Management

- 8,000 pounds of used electronic equipment is recycled each year.
- Recycling stations are located on every floor in Carthage residence halls and academic buildings.
- The College recycles old computers, monitors and keyboards. These items can be taken to the Lentz Hall garage or to the Hedberg Library loading dock, or contact the Maintenance Department.
- The College collects batteries, light bulbs and ink cartridges to be recycled. Learn more about what you can recycle.
- Sodexo, the College's food service operator, recycles all cooking oils. Approximately 35 gallons of campus cooking oil is recycled each week for biodiesel use.
- In campus construction and renovation, the College recycles materials, and uses recycled materials, whenever possible: 50 percent of Art Keller field turf is made with recycled materials; 85 percent of the former Siedemann Natatorium materials will be recycled.
- The Carthage Maintenance Department recycles refrigerant from small refrigerators in residence hall rooms. (Students who have a broken refrigerator should contact the Maintenance Department.)
- All motor oil from Carthage vehicles is drained and collected for refinement. Old oil filters are crushed and recycled.
- During move-in days at the start of the school year, Environmental Services brings in a special 30-yard dumpster for cardboard from moving boxes.
- Carthage utilizes solar-powered compactors.

Wofford College

Administration

- The President's Climate Committee Task Force supported a second greenhouse gas inventory and campus energy retrofits, and the class of 2010 established a sustainability fund to support additional projects on campus.
- The Office of Community Sustainability employs two staff, and the university purchases some Energy Star-qualified equipment.

Climate Change & Energy

- Wofford completed its first greenhouse gas emissions inventory in 2008 and its second in 2009. Lighting retrofits have been installed, and temperature setbacks have been implemented for energy efficiency.

Food & Recycling

- Dining services purchases some local products, including poultry and baked goods, and all milk purchased for the campus is hormone and antibiotic free.
- Much of dining services' waste is diverted from landfills, and the college recycles its institutional electronic waste in addition to traditional materials.

Green Building

- The Goodall Environmental Studies Center is built to LEED Certified standards and was renovated from a former textile mill office.
- The college has installed some dual-flush toilets and low-flow showerheads to reduce campus water consumption.

Student Involvement

- The Wofford College Go Green and Bonner Scholars student program pushed dining services to agree to a fair wage policy for farm workers.
- New student orientation features a reduced-waste meal and sustainability presentations, as well as two experiential learning opportunities focused on sustainable agriculture and campus waste reduction.
- The college helps sponsor ten student residential sustainability advisors.

Transportation

- Wofford sponsored a free bike-sharing program to promote cycling and has worked with local government and non-profit organizations to increase the number of bike lanes surrounding the campus.
- The campus fleet includes 12 electric vehicles.

Investment Priorities

- The college aims to optimize investment returns and does not invest the endowment in on-campus sustainability projects, renewable energy funds, or community development loan funds.
Spelman College's strategic plan includes sustainability goals. The Sustainable Spelman Committee, which reports to the president and includes students, staff, and faculty, recently wrote an energy policy and has also worked to expand recycling.

The college's green purchasing policy is currently under development, and an energy management policy mandates that all possible purchases must be Energy Star qualified.

Climate Change & Energy
- The college has completed a greenhouse gas emissions inventory, plans to reduce its carbon footprint, and uses compact fluorescent bulbs.
- The energy management policy, written by the Sustainable Spelman Committee, was endorsed by the senior leadership and implemented in February 2008.

Food & Recycling
- Spelman spends over 10 percent of its food budget on local products, including produce and milk, and buys organic products such as poultry and sauces.
- Some cage-free eggs and hormone- and antibiotic-free chicken are purchased for the campus. Fair trade coffee and tea are available in all dining locations.
- All cafeterias are trayless, and used cooking oil is recycled for biodiesel production. The campus recycles traditional materials as well as some electronics, and all landscaping waste is composted or mulched.

Green Building
- The Suites residence complex, opened in August 2008, achieved LEED Silver certification.
- Spelman plans to renovate six other residence halls to achieve LEED certification.

Student Involvement
- The college employs two student interns who focus on recycling.
- Students play an active role in addressing environmental stewardship through the Environmental Task Force and Sustainable Spelman groups.

Transportation
- Spelman subsidizes the cost of public transportation for members of the school community.
- Parking is limited to the periphery of campus in order to promote a bike- and pedestrian-friendly atmosphere.

Investment Priorities
- The college aims to optimize investment returns and has not made any public statements about investing the endowment in on-campus sustainability projects, renewable energy funds, or community development loan funds.
Green For All College Ambassador Program Overview

Overview

Green For All is working to reframe the face of environmentalism. Critical to this success is cultivating the next generation of green leaders, particularly youth from communities of color who have the most to gain from a clean-energy economy.

The Green For All College Ambassador program provides a focused vehicle to foster young, green-economy champions. The program follows the academic calendar and runs on ten historical Black Colleges and Universities (HBCUs). The Ambassadorship consists of expert trainings, a mentorship program in partnership with former Green For All ambassadors, student-led green education workshops, and a semester long campus sustainability initiative created and carried out by the Ambassadors with support from students, faculty and Green For All.

Through the Green For All Ambassador program, we hope to provide the tools and support that will allow students to step up to new levels of leadership. Through their leadership we will expand the base of students calling for sustainable changes and green economic development, and create real change throughout the HBCU system.

Goals:

- Build the movement’s membership among youth of color
- Increase student action around issues of sustainability and green jobs
- Generate greater awareness on how behavior and consumption affects the environment
- Develop HBCU campus infrastructure and power for the movement, including mobilizing faculty and staff
Outcomes:

- Develop 30 (2 on each campus) college leaders who identify as movement Ambassadors on their campuses
- Establish active base of 10 students at each targeted college/university
- Cultivate at least 2 staff and/or faculty allies at each targeted college/university
- Develop and complete one semester-long campaign at each targeted college/university

Targeted Schools:

- Alabama A&M University (Normal, Alabama)
- Claflin University (Orangeburg, South Carolina)
- Clark Atlanta University (Atlanta, Georgia)
- Delaware State University (Dover, Delaware)
- Dillard University (New Orleans, Louisiana)
- Elizabeth City State University (Elizabeth City, North Carolina)
- Florida A&M University (Tallahassee, Florida)
- Howard University (Washington, D.C)
- Jackson State University (Jackson, Mississippi)
- Kentucky State University (Frankfort, Kentucky)
- Lane College (Jackson, Tennessee)
- Morehouse College (Atlanta, Georgia)
- North Carolina A&T University (Greensboro, North Carolina)
- Spelman University (Atlanta, Georgia)
- Wilberforce University (Wilberforce, Ohio)
Program Elements:

The Green For All College Ambassador program will take place over the nine-month academic year and will consist of the following:

Training Overview

Two pre-selected students from each of the ten participating universities (30 students) will participate in a two-day training program led by Green For All.

The training will include:

- Historical overview of the environmental movement
- Examination of the root causes of persistent poverty and poor health among communities of color
- Current state of the environmental movement, including challenges and opportunities
- Overview of Green For All, its unique position, values and vision
- Role for young people in building a green economy
- Environmental literacy
- Team building and peer-support exercises
- Campaign planning
- Basic organizer training, including both on-campus and in the community
- Communications and media training

Ambassadorship:

The Ambassadorship will take place over the entire scholastic year. The initial training will take place in August, and an acknowledgement of completion will take place in May.

Semester 1:
The Ambassadors will run a semester-long series of educational activities to educate and inspire fellow students to action. This will contribute to building relationships with staff and faculty, and identifying a campus-based sustainability project to complete during the second semester. This is central to the ambassadorship as it will be the vehicle to engage and recruit student allies.
**Semester 2:**
The second semester will focus on organizing students to complete a campus-based sustainability project. Options include establishing awareness campaign, establishing a recycling and/or composting program on the campus, performing energy audits and retrofits on select buildings, creating an organic farm on campus to provide healthy food to surrounding communities and campus members, converting cafeteria to healthier food, etc.

The campus greening effort will be the most innovative and stringent part of the ambassadorship, and will also require the most support from Green For All, faculty and staff (guidance on technical aspects and resources to support the chosen project).

To celebrate the Ambassadors’ leadership and launch of their campus greening efforts, Green For All will facilitate a special recognition in the spring of 2012.

**Mentorship:**
Each Ambassador will be paired with a mentor. He/she will provide support throughout the program to the ambassador and engaged students. The mentor will be a Green For All Ambassador or Academy Fellow and assigned to the student based on area interest, geography, and availability.

The mentors will support the Ambassadors in various areas of their work from carrying out effective educational workshops, navigating the politics and processes of their campus-based initiative, to developing their own leadership capacity in purpose and vision. If an Ambassador has his/her own mentor in mind, Green For All can work to support them to complete the process.