

# Welcome to the Center for Sustainability

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Welcome to the Center for Sustainability (CfS) at Georgia Southern University. What is Sustainability? Sustainability is often defined as the ability to meet present needs without compromising the ability of future generations to meet their needs. In other words, sustainability requires careful use of our resources, including water, air, energy, biodiversity, soil, etc. so they will be in adequate supply for the foreseeable future. [Calculate your ecological footprint](#) to find out if you're living a sustainable life.

## Spring 2017 Calendar Now Available

CfS has released its [Spring 2017 calendar](#) – We are especially looking forward to the following highlights:

**Feb 5 – March 31 RecycleMania:** a recycling tournament among universities in the US and Canada to see who can recycle the most over the 8 weeks. Do your part to improve our standing this year! (Campus – with DFS)

**Feb 15 Sustainability Speaker:** Seth Orme–Packing it out (7 p.m. Nessmith Lane-Assembly Hall)

**March 9 Recycled Boat Regatta:** Which recycled boat will conquer? (Details TBA)

**March 28 Sustainability Speaker/Global Engagement Series:** New Story: Transforming Slums into Sustainable Communities (7 p.m., PAC)

**April 9-16 No Impact Week:** events every day on campus – with University Wellness Program

**April 7-24 Sustainability Showcase:** Henderson Library 1st floor exhibit space

## Faculty Resource List now Available

CfS offers tours and presentations, grants, films, speakers, programs and much more. Download a list of resources available for faculty in course planning [here](#).

## Online Sign-up for Field Trips and Volunteer Opportunities

Want help make our community more sustainable or participate in a field trip? We need volunteers for tailgate recycling at the home football games! Use our online interface to sign up for our many sustainability opportunities. Click here to sign up



# Sustainability Fee Grants

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## **Congratulations to the FY2017 Grant Winners!**

The Center for Sustainability received 31 proposals from 9 academic departments and five additional units, requesting \$783,038 in funding for FY2017. The Sustainability Fee Committee selected 18 of these proposals for full or partial funding, for a total of \$251,310.

- Golf Course Tree Planting, CRI, Patrick Reinhardt – Superintendent, \$4,300
- Bicycle Repair Stations, University Housing, James Farquharson, \$4,000
- Water Fountain Refill Stations, University Housing, James Farquharson, \$8,086.50
- Lower PAC Parking Lot LED Lighting Upgrade, Facilities Services, James Grigg – Director of Operations, \$13,700
- Henderson Lighting Controllers to Take Advantage of Daylight Savings, Facilities Services, James Grigg – Director of Operations, \$4,950
- Solar Powered Ground Mount Cart Charging Stations, Facilities Services, James Grigg & Dr. Rami Haddad (Electrical Engineering), \$14,312
- Healing Landscapes: Additional Bioswales Plantings at Akins Blvd and Pollinator Planting Along Campus Greenway Trail, Facilities Services, Chuck Taylor – Campus Landscape Architect, \$15,000
- Old Register Road: Multipurpose Trail Phase 2, Facilities Services, Chuck Taylor – Campus Landscape Architect, \$66,800
- Development of Platforms to Access Data on Sustainable Biodiversity on the Georgia Southern Campus. Department of Biology, Drs. Michelle Cawthorn, Ray Chandler, Lance McBrayer & Jamie Roberts, \$32,572
- LED Modular Retrofit Project: RAC – Free Weight Area, CRI, Jason Schmidt – Facility Coordinator for Physical Operations, \$7,955
- GROW ZONE at the Botanic Garden: Building a plantastic place for everybody to learn how to grow just about anything, Botanic Garden, Carolyn Altman – Director, \$13,000
- Dutch Elm Disease Resistant Cultivars for Campus Environmental Sustainability, Department of Civil Engineering and Construction Management, Dr. John Dryden, \$3,135

- RAC Walking Trail New Solar Lighting, Facilities Services, James Grigg – Director of Operations, \$16,250
- Rehabilitation of Beautiful Eagle Creek (Phase 2), Department of Biology, Drs. Checo Colón-Gaud, Alan Harvey & Jamie Roberts, and Facilities Services, James Grigg, \$27,850
- FabLab Filling Station, Business Innovation Group, Dominique Halaby – Director, \$1,650
- Quantification of the Reduction of Chemical Waste Produced in the Organic Chemistry Teaching Laboratories at Georgia Southern University by Conversion to Microscale, Department of Chemistry, Hans-Jorg Schanz, \$7,500
- Bottle Fill Stations, Russell Union Facility & Event Services, Marcya Barreiro – Asst. Director, \$3,000

## **Project Summaries of FY2016 Grants**

### **Bicycle Parking Facilities: Hendricks Hall and College of Engineering**

*Chuck Taylor, Campus Landscape Architect, Facilities Services (\$25,000)*

These bicycle parking facilities would be located adjacent to Hendricks Hall and College of Engineering building entries. Each facilities would consist of a concrete plaza with permanent campus standard bike racks, each rack having the capacity of approximately 11 bicycles, giving Hendricks Hall 22 bike parking capacity and College of Engineering 44 bike capacity. Additional landscaping around the bike facilities of native grasses will be used to help mitigate additional rainwater runoff from the increased pervious area.

### **Bicycle Repair Station: Pedestrium Between COBA and IT**

*Chuck Taylor, Campus Landscape Architect, Facilities Services (\$2,400)*

The bike repair station includes all the tools necessary to perform basic repairs and maintenance, from changing a flat to adjusting brakes and derailleurs. The tools and air pump are securely attached to the stand with stainless steel cables and tamper-proof fasteners. Hanging the bike from the hanger arms allows the pedals and wheels to spin freely while making adjustments.

### **Bio-assessment and Monitoring at Beautiful Eagle Creek**

*Dr. Checo Colón-Gaud, Dr. Jamie Roberts, Dr. Abid Shaikh, Departments of Biology and Chemistry (\$31,787)*

We propose research/monitoring and education/outreach efforts at Beautiful Eagle Creek with emphasis on 4 key elements geared to (1) enhance riparian and in-stream habitats (2) implement

environmental outreach, education and training projects that integrate university students, local area schools, and community groups (3) provide measurable results including guidelines for ecological restoration of the site, student training and the development of yearly programs that foster citizen science and environmental sustainability (4) fostering partnerships that engage a diverse group of university and community entities to achieve ecological and educational outcomes. The purpose of this project is to create a structured research/education program designed to monitor conditions at the site, primarily focusing on metrics of biological integrity. Our fundamental goal is to further strengthen the preparation of our students and the efforts of community-based advocacy groups by providing education and outreach opportunities that focus on natural resources in the region, particularly the conservation of freshwater habitats.

### **Bottle Filling Stations**

*Dr. Ann Hamilton, Zach S. Henderson Library*

Four water fountains by the main staircase at the front of the building will be converted to water bottle filling stations. There will be one installation on each floor of the Library next to a traditional water fountain.

### **Eagle Hydration Stations**

*Drs. Celine Manoosingh and Francisco Cubas, Department of Civil Engineering and Construction Management*

Building, College of Engineering and Information Technology, as well as the Engineering Technology building, aim to provide hygienic, hands-free water dispensers. The goal of installing these high efficiency, low cost units is to reduce the ecological footprint of water bottles on the Georgia Southern University campus by 10-15% by the end of 2016. Hydration stations would provide students with an alternative to bottled water by dispensing free, filtered tap water, culminating in a decrease in the consumption of bottled water on campus. In accordance with this goal, this proposal also encompasses a campus-wide campaign to make students aware of the environmental impact of the production, packaging, transport, usage and disposal of plastic water bottles. Additionally, undergraduate students will also be involved in performing a life cycle assessment of the embodied energy saved by the plastic water bottles displaced. It is expected that the hydration stations and associated awareness campaign will result in a shift toward a more sustainable Georgia Southern campus, and a more environmentally aware student population.

## **FMAD Stitch**

*Amber M. Shelton, Dr. Rachel J. Eike, & Dr. Beth Myers, Fashion Merchandising and Apparel (\$2,500)*

FMAD Stitch's focus is to provide custom mending and alteration needs of students, staff, and faculty. This sustainability program serves two groups: FMAD Students and members of the Georgia Southern University campus community. FMAD students have the opportunity to practice skills and techniques learned in the classroom regarding mending, alterations, and tailoring. FMAD students will gain hands on training and experience as they prepare to become employed in the fashion industry. The Georgia Southern University campus community will save their personal income by allowing FMAD students to repair, tailor, or hem their clothing or uniforms as necessary, as opposed to discarding non-functional garments into the landfill and purchasing new. The FMAD Stitch program will also give FMAD students the opportunity to educate the Georgia Southern University community about the importance of well-fitted, tailored clothing. FMAD stitch will allow FMAD students to practice the proper procedures for documenting sessions with a "fit model", communicating their mending/alteration process, and develop their time management skills. The FMAD Stitch program will provide FMAD students with concrete examples of their skills that they may share with a potential employer – demonstrating skill mastery in the apparel industry.

## **Georgia Southern Aquaponics: Sustainable Food Production on Campus**

*Dr. Subhrajit Saha, Amber Monroe, Ryan M. Day, Dept. of Biology (\$21,132)*

Food is one of the key focal areas of campus sustainability initiatives and the proposed project will study an aquaponics system and train Georgia Southern University students on sustainable food production at their residences. Aquaponics is a sustainable and alternative form of agriculture, where aquatic fauna and crops are grown together in a mutually beneficial way. The proposed project will involve production of four different types of crops, a leafy vegetable (Lettuce), a fruit-bearing vegetable (Tomato), a fruit (Strawberry) and an herb (Mint) with crayfish as aquatic species. Using the aquaponics study as demonstration resources, Georgia Southern University students will be trained on developing miniature aquaponics systems to grow food at their dorms, apartments or houses.

## **Greencycling at the Botanical Garden: A living buffer and composting solution to an ever-growing problem**

*Carolyn Altman, Botanical Gardens of the Coastal Plain (\$8,800)*

Greencycling at the Garden will create a living border around most of the 11-acre Garden. The plants in this border will add to the Garden's collections and help address the air, noise and water pollution created by the busy Fair Road and Georgia Avenue Corridors. The creation and maintenance of this border will produce more leaves and limbs than the Garden soil can absorb, so the project also includes a request for a dump trailer, which will be used to haul the ongoing debris and, in the years following, tons of daily leaves and limbs from the entire Garden to Physical Plant. Physical Plant has agreed to grind the debris into much-needed mulch, thereby returning a huge volume of plant material to Georgia Southern University soil.

### **Install Electric Vehicle (EV) Charging Station at Parking and Transportation**

*James Grigg, Director of Facilities Operations, Division Facilities Services (\$15,500)*

Install Electric Vehicle (EV) charging stations at the Parking & Transportation building (behind Russell Union and Dining Commons)

### **Installing Bottle Filing Stations in Newton**

*Dr. Mary Villeponteaux, Department of Literature and Philosophy*

This project will address waste. If students can refill re-usable water bottles, they will be less likely to buy disposable bottles of water. Disposable plastic bottles are a waste of resources. The Production and transport of plastic bottles uses millions of barrels of oil every year. According to the website Food and Water Watch, about 75% of empty plastic bottles end up in landfills rather than being recycled.

### **LED Lighting Upgrade Parking Lot: Ceramic Sculpture Bldg**

*James Grigg, Director of Facilities Operations, Division of Facilities Services (\$23,000)*

Retrofit existing pole lighting in parking lot- Ceramic Sculpture- across from Biology Science Complex at Akins Boulevard. The lot's outdoor lighting system consists of 8-40' poles and 24-400 watt fixtures. The retrofit would maintain existing light levels and reuse existing poles and provide state of-the-art Lighting Emitting Diode (LED) "high efficiency" outdoor lighting system.

### **Solar Patio Table Charging Stations**

*Dr. Robert Lake, Department of Curriculum, Foundations, and Reading (\$40,950)*

At the request of the customer, SolGreen Solutions will manufacture, deliver and install FOUR (4) solar powered SolGreen Evodia Mini SmartTable(s), a commercial outdoor table and shelter integrated with an off-grid solar power system. The Patented Evodia Mini SmartTable will provide 110V power via standard AC outlets, as well as 5V DC via USB allowing users to recharge their portable electronic devices. It will provide individual seating for four people. Standard features include the Intelligent Rain Detection System, one high-power PV module, LED lighting, and 210AH power storage for after-hours usage. Steel will be powder coated with standard finish. Fiberglass will be finished in standard color gel coat of customer's choice. Optional upgrades such as custom steel and fiberglass colors and/or logo, a Wi-Fi hotspot, larger PV modules, additional battery storage, or scrolling LED displays can be added for additional cost at the customer's request. The outdoor installation site will be on the customer's site located at 1332 Southern Drive, Statesboro, GA 30458. This bid will include the complete manufacturing, shipping, and professional installation of FOUR (4) SolGreen Evodia Mini SmartTable(s).

### **Sun-Tracking Golf Cart's Roof-Mounted Solar Panel for Improved Performance**

*Drs. Rami Haddad, Youakim Kalaani, Frank Gross, Department of Electrical Engineering (\$2,114.29)*

This proposal requests funding to acquire equipment to design and install a sun-tracking system for the retrofitted solar panels on Electrical Engineering Department electric golf cart. The sun-tracking system will provide the maximum solar energy generated by the solar panels since the incident sun light angle will always be around 90 degrees of the surface of the panel which maximize the area effective area of the solar panel that collects energy.

### **Using Vertebrates to Provide a Framework for Sustainable Biodiversity on the Georgia Southern Campus**

*Drs. J. Michelle Cawthorn, C. Ray Chandler, Lance McBrayer, James H. Roberts, Department of Biology (\$3020.89)*

Project Summary: A critical measure of a sustainable university is that it operates without reducing the biodiversity on its own campus. However, the primary impediments to sustaining biodiversity on campus are a lack of data on what species occur on campus and lack of a mechanism to readily access whatever data do exist. Our study will provide a comprehensive inventory of the vertebrate biodiversity on the Georgia Southern campus (phase 1). We will also make these data available to members of the campus community, and the general public, via a website (Phase 2)

## **Project Summaries of FY2015 Grants**

### **Bigbelly Solar Powered Compacting Trash Cans And Recycling Cans**

*James Grigg, Director of Facilities Operations (\$18,300)*

Deploy 3 double bin Big Belly compacting recycling contains on campus. To target high demand areas of the campus (bus stops, pedestrian, etc.) The BigBelly's have built in solar powered compactors and a wireless alert system for notification when the bins are getting full. The container will hold 150 gallons of waste vs. the standard cans of about 30 gallons. The compactor and built in alert system allows more material to be picked up as needed, not on a set schedule whether they need emptying or not.

### **Design of High Speed Computer Networks Aimed at Reducing Energy Consumption and Carbon Emission at Georgia Southern University**

*Danda B. Rawat, PhD (\$31,065.40)*

With the exponential growth of the Internet use, many organizations (including Georgia Southern University) use vast amount of energy/power to operate and cool their network infrastructures and thus produce significant amount of carbon waste. The main focus of this research is to design OpenFlow based networks that will result in high-speed computer networks and dramatic reductions of energy consumption and carbon emission. An experimental OpenFlow based network will be established and tested in the CWiNs lab of Georgia Southern University with the specific purpose of demonstrating the significant energy savings and reduction in carbon waste that can be achieved while providing reliable and fast networking services at Georgia Southern University.

### **Georgia Southern University Gold Course Operation Pollinator**

*Patrick Reinhardt, Golf Course Superintendent (\$2,378.80)*

Operation Pollinator is an international effort designed to increase the population of pollinating insects by creating diverse habitat tailored to local conditions and insect populations. Pollinating insects are crucial for the success of many natural habitats and the production of many food crops. The program will be introduced to the golf course by converting out of play areas from bahia grass and Bermuda grass to a blend of native wildflowers.

## **High Capacity Lithium Ion Battery for Self-powered and Sustainable Street Light Unit on Georgia Southern University Campus**

*Ji Wu (PI) and Shaowen Xu (Co-PI) (\$13,344)*

In this project, a high capacity Lithium ion batteries (LIBs) are proposed for Self-power Sustainable Light Unit on the streets or parking lots of campus. First, the high capacity lithium ion batteries (LIBs) will be fabricated using silicon as the active material for higher energy capacity. The reason for adopting Silicon-based LIB is that its theoretical energy capacity (4200 mAh/g) is much higher than that of commercial available graphite-based LIBs (370 mAh/g). Secondly, these high capacity silicon-based LIBs will be utilized to store the energy harvested from solar panels for street/parting lots lighting. A prototype device will be built and installed on campus for testing.

## **Led Lighting Upgrade Parking Lot: Hanner Fieldhouse**

*David Faircloth, Director of Facilities Planning, Design, and Construction, Division Facilities Services (\$32,800)*

Retrofit existing pole lighting in parking lot –Hanner Fieldhouse – front lot and side lot along Fair Road. The lot's outdoor lighting system consists of 7 – 45' poles and 16 – 400 watt fixtures. The retrofit would increase existing light levels and reuse existing poles and provide state-of-the-art Light Emitting Diode (LED) "high efficiency" outdoor lighting system. The project would consist of removing existing light fixtures and replacing light fixtures and upgrading outdoor lighting controls. The current 400 watt fixture lighting would be replaced with lower watt LED fixtures reducing energy consumption by approximately 30% with equivalent light outputs on the parking lot. Daylight to dusk lighting controls would be installed (upgraded). Students using this parking facility access the Hanner Fieldhouse classes and associated athletic venues on campus. You will be able to measure the results by installing power metering on the lighting circuits.

## **Living Wall Downtown**

*Dr. Dominique Halaby, with Student Leaders Katie Reams and Abbie Pelech (\$19,650)*

Georgia Southern students will work with university architects and contractors to design, build, and maintain a vertical garden as a signature component to the Georgia Southern City Campus. The Living Wall Downtown will foster the spirit of innovation and serve as a university-wide and community-wide model of sustainable practices.

## **Safe and Spectacular Smart Energy Lighting for Georgia Southern's Green Jewel: Sustainable LED Lighting at the Garden of the Coastal Plain**

*Carolyn Altman, Garden Director (\$17,900)*

This project will engage a sustainable lighting design expert to design an overall lighting and power master plan for the Garden. A critical part of this master plan, the lighting of the Concert Lawn, Arboretum, and Native Plant Landscape Garden, will then be implemented as Phase One. This proposal includes costs for design services, materials, and installation.

## **Stormwater Improvements: Bioswales at Akins Blvd**

*Chuck Taylor, Campus Landscape Architect. Division Facilities Services (\$16,600)*

This stormwater bioswale would be located in the existing drainage ditches along Akins Blvd. The site currently contains an eroded drainage swale along the west side of Akins Blvd and grassed swales in the center boulevard. The area is subject to heavy stormwater runoff from the RAC, adjacent streets & parking lots. All runoff in the area goes directly into the adjacent wetlands via the swales. The proposed bioswale conversions would aid in slowing the runoff and filter water contaminants in an effort to mitigate flooding, soil erosion and storm water pollutants. (This project is identified as part of the campus sustainable landscape maintenance master plan.)

## **Stormwater Improvements; Bioswales and Fair Road**

*Chuck Taylor, Campus Landscape Architect. Division Facilities Services (\$33,400)*

The stormwater bioswale would be located in the open space along Fair Road between Herty Dr. & Chandler Rd. The site currently contains an eroded drainage swale within the wooded site. Heavy rains and runoff from adjacent university owned streets & parking lots frequently overwhelm the site and contribute to flooding downstream. The proposed bioswale would aid in slowing the runoff and filter water contaminants in an effort to mitigate current flooding and erosion.

## **Sustainable Wind Energy Harvesting from Campus AC Cooling Towers/Chillers**

*Drs. Frank Gross/Rami Haddad/Youakim Kalaani (\$11,014.88)*

Our energy sustainability project is to attach wind turbines to one or two chillers/cooling towers located on campus (Bioscience Bldg, CEIT Bldg). We will use an anemometer to measure cooling tower wind speeds and use this data to purchase the most appropriate wind turbines (400W, 800W,

1200W, etc.) for mounting. In addition, we will take the substantial harvested energy and put it back into the Georgia Power grid thus lowering the overall Georgia Southern University utility bill and/or use the energy output to charge campus golf carts out on duty. Small wind turbines can possibly harvest up to 2 kilowatts of power per cooling tower. The harvested energy can subsequently lower utility costs for the whole campus.

### **Water Bottle Filler Installation: RAC and CRIBB**

*Jason Schmidt, Facility Coordinator for Physical Operations, CRI (\$2,543.70)*

Retrofit six existing drinking fountains with water bottle filling stations within M.C. Anderson Park. This effort will promote the reuse of personal bottles/containers by our patrons. The water bottle fillers will be installed in the following locations: natatorium (2), outside of the aquatics locker rooms, between the bathrooms off the cardio deck, hallway between MAC gym and 2 court and at the CRIBB (building located at the front entrance to the multiplex).

### **Project Summaries of Spring 2014 Grants**

#### **Assessment of Water Quality and Soil Sequestration to Ensure Environmental Quality at Georgia Southern University Campus**

*Dr. Arpita Saha (PI), Dr. Subhrajit Saha (Co-PI), and Matthew Pfister (Co-PI)*

The proposed project has two parts, first part involves analysis of campus surface water quality and the second part involves measurement of campus soil carbon storage. The storm water runoff from off-campus and on-campus sources has the potential to pollute the campus water bodies and the findings of our study will recommend remedial strategies, which may help authorities to take necessary actions. The campus soil carbon distribution will be inventoried and the factors (land use, management) supporting soil C stocking will be identified and recommended to help authorities promote climate change mitigation and adaptation strategies on campus.



[Assessment of Water Quality and Soil Carbon Storage to Ensure Environmental Quality at Georgia Southern University Campus](#)

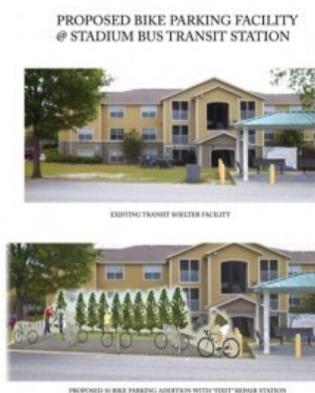
## **Bicycle Repair Station: Student Union**

*Chuck Taylor, Campus Landscape Architect*

The bike repair station includes all the tools necessary to perform basic repairs and maintenance, from changing a flat to adjusting brakes and derailleurs. The tools and air pump are securely attached to the stand with stainless steel cables and tamper-proof fasteners. Hanging the bike from the hanger arms allows the pedals and wheels to spin freely while making adjustments.

## **Bicycle Parking Facility: Stadium Bus Stop**

*Chuck Taylor, Campus Landscape Architect*



The bicycle parking facility would be located adjacent to the existing bus shelter at Paulson Stadium. The facility would consist of a concrete plaza with four permanent campus standard bike racks for a combined parking capacity of 50 bicycles. Also included is a bike repair station. A landscape rain garden around the bike facility will be used to mitigate additional rainwater runoff from the increased pervious area.

[Bicycle Parking Facility Stadium and FOY Area](#)

## **Campus Sustainability Interpretive Signage**

*Chuck Taylor, Campus Landscape Architect*

Georgia Southern University has implemented several sustainable projects on campus, (ex. bioswales, greenway trail, reuse water, native plantings, etc.) but there is little to no signage at the project site to identify and/or explain the importance and significance to the public and campus community.

[Interpretative Signage](#)

## **Forest Drive: Bicycle Lane/ Sharrow Markings**

*Chuck Taylor, Campus Landscape Architect*

Forest Drive between Old Register Road & Sweetheart Circle is not wide enough to install dedicated bicycle lanes. The master plan envisions street modifications to incorporate dedicated bike lanes and tree lined sidewalks. The "sharrow" lane markers would be the first phase in identifying Forest Drive

as a campus road that is to be equally shared by cars and bicyclists until the “master vision” can be implemented.

### [Forest Drive Bicycle “Sharrow” Symbols](#)



### **LED Lighting Upgrade Parking Lot: IT Building Parking Lot**

*David Faircloth, Director of Facilities Planning, Design, and Construction, Division Facilities Services*

Retrofit existing pole lighting in parking lot -IT Parking Lot – behind IT building across from Arts Building Complex. The lot’s outdoor lighting system consists of 6 – 40’ poles and 11-400 watt fixtures. The retrofit would maintain existing light levels and reuse existing poles and provide state of-the-art Light Emitting Diode (LED) “high efficiency” outdoor lighting system.

### **Nanofiber Based Carbon Capture Technology to Reduce the CO2 Emissions in Georgia Southern University Campus**

*PI: Dr. Mujibur Rahman Khan Co-PI: Spencer Harp*

In this project we propose a transformative idea of nano fibers based on CO2 capturing filter technology to reduce the CO2 emission from the Machine Shops, Dining Commons, and Georgia Southern University Vehicles.

### [Nanofiber Based Carbon Capture Technology to Reduce the CO2 Emissions at Georgia Southern University Campus](#)

### **The Moth Project**

*Assistant Prof. Jeff Schmuki (Georgia Southern) and Associate Professor Wendy DesChene (Auburn University)*

The ArtLab is an off-grid, solar powered 10-foot trailer that houses a mobile art space/laboratory or ArtLab. The ArtLab provides the stage for native plant gardens and solar powered light tents that attract moths and other insects for a non-destructive survey. The Moth Project shares the importance of pollinators in the environment through a hands-on community/citizen science and art experience. Research will be compiled into a free downloadable field guide of the local moths found on the Georgia Southern campus that will



interest in sustainability while promote simple actions that assist our declining pollinators and encourage backyard naturalism.

[The Moth Project](#)

### **Portable Sustainability Exhibit**

*Dr. Brent W. Tharp*

The Georgia Southern University Museum in cooperating with the center for Sustainability will create a traveling, interactive exhibit based on their successful Sustainable Solutions exhibit to introduce the concept of sustainability and highlight the efforts of Georgia Southern University. The exhibit will be highly mobile and adaptable to a large variety of spaces to maximize its use and would be manned by trained students recruited by the Museum, CFS, and the Office of Student Leadership. It will be used at campus events, such as ArtsFest, No Impact Week, Earth Day, and throughout the year at any opportunities highlighting or dedicating other sustainability projects/activities. It would also be available to schools throughout southeast Georgia who frequently request activities/exhibits for science nights and special events and other community events.

[Portable Sustainability Exhibit- Georgia Southern Museum](#)

### **Solar Energy Potential at Georgia Southern University**

*Dr. David Calamas*

The proposed project intends to assess the solar energy potential at Georgia Southern University. Equipment to measure the magnitude, direction, and duration of incident thermal radiation from the sun will be installed. A monitoring station connected to the equipment will allow the solar energy potential at Georgia Southern University to be monitored throughout the year. The data will be analyzed to determine the viability and cost effectiveness of using solar energy as an energy course on campus and recommendations will be made as to which, if any, technology would be appropriate to use on campus.

[Solar Energy Potential at Georgia Southern University](#)

## **Solar Powered Service Golf Carts**

*Dr. Rami Haddad, Dr. Youakim Kalaani, Dr. Frank Gross*

In this project, we propose to equip twenty five electric golf carts at Georgia Southern University with solar photovoltaic charging systems. These goals are set to reduce the conventional electric charging by at least 45%, increase the operational range by at least 50%, increase the life of the batteries by 100%, promote sustainability and contribute to our world in an environmental friendly way by reducing emission/chemical pollution.

[Solar Powered Service Golf Carts](#)



## **StormWater Park: Plant and Forest Drive**

*Chuck Taylor, Campus Landscape Architect*

The stormwater management park would be located at the corner of Forest & Plant Drive. The storm water park would restore the existing wetlands and create new bioretention gardens to mitigate the effects of polluted stormwater/soil erosion that impact the campus wetlands.

## **How to Apply for a Student Sustainability Fee Grant**

Student Sustainability Fee Project Grants were established in Spring 2014 to improve environmental sustainability across campus with Sustainability Fee funds. Project proposals, ranging from \$1,000 – \$100,000 may address any aspect of sustainability in the areas of Water, Energy, Waste, Biodiversity, Food, Transportation, Sustainability Promotion etc. and may range from increasing biodiversity, to improving energy efficiency, implementing renewable energy solutions to encouraging sustainability behaviors, to improved waste reduction, to increasing campus sustainability awareness with interpretive signage, etc. Sustainability Fee projects may be proposed and conducted by any student, faculty, or staff member at Georgia Southern.

An annual call for proposals will be released February 15 of each year and will be due the first Monday in April for funding in the next fiscal year.

[Click here for Sustainability Fee Grant Project Guidelines](#)

## **Sustainability Incentive Grants – 2008-2010**

During 2008-2010, the Sustainability Incentive Grant was established to encourage COSM faculty, staff and students to incorporate sustainability into teaching, scholarship and service; and to encourage partnerships with the community to improve sustainability. \$15,000 available; up to \$3,000 per grant.

## Green Eagle Awards

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### Green Eagle Awards



The Green Eagle Award for Sustainability honors individuals who exhibit excellence in supporting Georgia Southern's commitment to sustainability. Such efforts include demonstrating representative practices, sharing solutions, incorporating sustainability into current programs, and implementing innovative ideas. Candidates will be chosen from campus-wide nominations that clearly show an individual's commitment to go above and beyond to ensure campus sustainability goals. In 2016, the Sustainability Fee Committee will select two staff, two faculty/administrators and two students to be Georgia Southern University's first Green Eagle Award recipients.

### **Nominations are now open for 2nd Annual Green Eagle Awards!**

Green Eagles are students, faculty and staff who exhibit excellence in support of Georgia Southern's commitment to sustainability. Use the online form to nominate a worthy colleague or student today! (No self-nominations, please). The award ceremony will be Thursday April 21 from 3pm to 5pm at Henderson Library.

Complete the online [Green Eagle Award Nomination Form](#)

**Deadline to nominate someone is Monday, April 4, 2016 at 11:59pm**

### **Eligibility Criteria for a Green Eagle Award**

For consideration, nominees must meet the following criteria:

- Nominee must currently be staff, faculty or student at Georgia Southern University.
- Nominee must have a dedicated track record of sustainable actions on campus that are in line with Georgia Southern University's sustainability initiatives.

- Nominee must display outstanding leadership and dedication through their involvement in sustainability at Georgia Southern University.
- Engage others in efforts to advance sustainability in campus operations, culture, and/or academics.
- Pursue these efforts above and beyond what is expected of them as a student, faculty or employee.
- Past winners will not be eligible to receive the award. Once a Green Eagle, Always a Green Eagle.

**Student** (must be in good academic standing)

- Demonstrated commitment to improving campus/community sustainability.
- Contributions to sustainability education on campus, or in research and writing.
- Demonstrated sustainability leadership.

**Faculty/Administrator**

- Demonstrate a concerted effort in educating students about sustainability principles.
- Incorporate methods and materials into the curriculum, including current sustainability information, case studies, expert advice on alternative methods and practices used in a particular industry or career path, etc.
- Facilitate opportunities to learn about procedures that can be implemented to create a more just and sustainable organization, business, or government
- Build capacity for sustainability on campus through decisions about buildings, space use, departmental infrastructure, etc.

**Staff**

- Engage the campus community in sustainable practices by educating and encouraging individuals to take actions that reduce commuting emissions, waste, water and energy use, promote health, wellness, human rights and equality.
- Lead an initiative or project in sustainability of which substantial outcomes occurred.
- Implement an innovative idea that improves the sustainability of an ongoing operation or activity occurring on campus.

**Nomination process**

The Center for Sustainability will accept an online nomination from the nominee's faculty mentor, adviser, staff member, or colleague who is familiar with the nominee's work. Students, staff and faculty may NOT self-nominate. The nomination should include:

- Statement describing the nominee’s sustainability role and activities at Georgia Southern University.
- Statement describing the nominee’s contributions to campus sustainability projects and/or sustainability research.
- Description of the impact of the nominee’s activities on sustainability initiatives at Georgia Southern University.

**Please note:** All nominees will be judged on the above criteria and will be judged only on the information provided by the nominator.

Complete the online [Green Eagle Award Nomination Form](#)

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### ***Congratulations to the winners of the 2015 Green Eagle Award***

#### ***Students***

Christina Beslin

Mary Samar

#### ***Staff***

Dr. Brent Tharp

Jeffrey Yawn

#### ***Faculty***

Rebecca Larson

Dr. Subhrajit Saha

