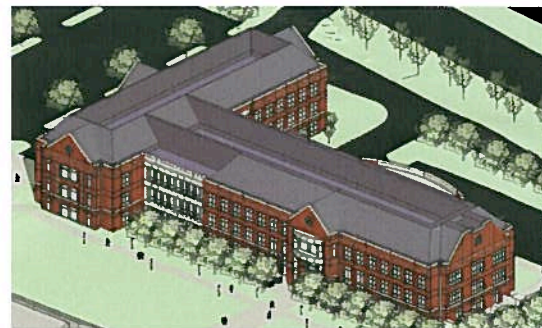


# Salisbury University Sustainability Initiatives: 2009

## PERDUE BUILDING

- This building will be designed and constructed in accordance with LEED silver certification requirements at a minimum.
- Through the use of carbon dioxide sensors to better control the flow of outside air mixing with pre-heated and pre-cooled air inside the building, as well as the commissioning of the HVAC system to ensure it is working at peak efficiency, the Perdue Building will use 24 percent less heating and cooling energy than a comparable classroom building constructed using Best Practices.
- A 15-ton geothermal heat pump will be utilized for the Perdue Museum portion of the building. In addition to conditioning the museum, it will serve as a learning tool for SU environmental students.
- The building is being constructed in a pre-developed area, limiting sprawl.
- The building is being constructed close to two bus lines—SU and Shore Transit—encouraging the use of public transportation.
- The building will include bicycle rack space for at least 70 bikes, encouraging students, faculty and staff to cycle instead of drive.
- Approximately 10 to 15 percent of the paved area where the Perdue Building is slated will be returned to grass and softscape materials.
- At least 75 percent of all waste material created during the project will be recycled.
- The building will contain at least 20 percent recycled materials.
- At least 20 percent of all materials used to construct the building will be purchased locally, requiring less fuel and fewer emissions for shipping.

- A daylight harvesting control system will shut off lights in areas of the building when a sensor detects enough natural sunlight to adequately illuminate the interior. In addition, motion sensors to control lighting will be used in a significant portion of the building, reducing energy.
- Energy-efficient glass and glazing will be used throughout the building.
- The building will contain an active environmental education program incorporating signage and outreach with a focus on sustainable living.
- SU has hired a consultant to perform a solar energy study and is investigating the cost and payback period to possibly install a 20-kilowatt photovoltaic solar panel array on the building's roof. Cost would be a minimum \$300,000. The energy produced could light about 100 lights—roughly the first-floor corridor. If installed, this also would be used as a teaching tool.
- SU will reserve some parking spaces close to the building for low-emitting and fuel-efficient vehicles (hybrids).
- Housekeeping will be performed in accordance with Green Housekeeping Practices.



## HORTICULTURE

- SU's recycling program began in 1990 through the Horticulture Department.
- New benches are made from recycled material.
- Since 2003, SU has recycled more than 70 tons of computers and audio-visual equipment.
- Students weed planting beds to reduce the use of weed killer.
- In the greenhouse and interior spaces, Ivory soap and water are used instead of typical chemicals to remove insects.
- Mulching blades are used on SU lawnmowers to reduce waste and add nutrients to the soil.
- Bicycle racks are incorporated into campus design to promote an alternative to driving.
- Greenhouse staff wash and reuse pots and bedding trays instead of discarding.
- Campus trash containers are paired with recycling receptacles so users have a choice.
- Maryland requires the University recycle 20 percent of its trash; SU always far exceeds this standard.

## TEACHER EDUCATION AND TECHNOLOGY CENTER

- SU is pursuing LEED certification for this new facility.
- Some floor areas have been covered with renewable and recyclable bamboo in lieu of traditional resilient tile. Most of the flooring materials used throughout the building are 100 percent recyclable.
- Approximately 40 percent of the building's structural frame is made from recycled materials.
- The heating, ventilation and air conditioning system is ultra-efficient and uses no CFCs.
- The building was constructed close to two bus lines—SU and Shore Transit—encouraging the use of public transportation.
- Bicycle racks for nearly 80 bicycles were integrated into the design to encourage bike riding instead of automobile use.
- The open space surrounding the building is equal to the building footprint. In doing this, SU returned a significant portion of formerly paved area to grass.
- The paints and coatings for the building met or exceeded Green Seal requirements, and all carpets met or exceeded the Carpet and Rug Institute Green Label Indoor Air Quality Test Program.
- The building was constructed in a pre-developed area, limiting sprawl.
- Five percent of all new parking spaces outside the building are reserved for low-emitting and fuel-efficient vehicles (hybrids), while another 5 percent are reserved for carpooling vehicles.
- Electric charging stations for hybrid cars are provided.
- High-efficiency plumbing fixtures installed in the building reduce water use by approximately 20 percent over traditional fixtures.
- A dedicated recycling area is provided at the building for paper, glass, plastics and metals.
- At least 50 percent of waste from construction and the demolition of pre-existing surfaces was recycled or salvaged.
- The interior building materials contain at least 10 percent recycled materials.
- At least 10 percent of all materials used to construct the building were purchased locally, requiring less fuel and fewer emissions for shipping.
- Energy-efficient glass and glazing were used throughout the building.
- Task lights were installed in more than 90 percent of all work stations in the building so larger area ceiling lights may remain off during the day.
- The building contains an active environmental education program incorporating signage and outreach with a focus on sustainable living.
- Housekeeping is performed in accordance with Green Housekeeping Practices.



## FACILITIES SERVICES

- All washers and dryers in SU residence halls are Energy Star rated units. The new washers use 12.2 gallons per wash—a savings of three gallons from previous machines. In addition, washers feature an auto-injection system for high efficiency detergent to eliminate the need for large, plastic detergent and fabric softener bottles. The manufacturer of the machines—Mac-Gray Intelligent Laundry Systems—has included SU as one of the first three institutions in its new carbon neutral footprint program.
- Most cleaning supplies are GS-37 certified, meaning they are biodegradable.
- Cleaning equipment, such as mops and pads, is laundered to reduce the frequency of replacement.
- Housekeeping hours are 4 p.m.-12:30 a.m. to reduce the amount of energy needed to heat and light the buildings for cleaning.
- All residence halls and most academic buildings use coreless toilet tissue that has 70 percent post-consumer recycled waste.
- Paper towels have been replaced in residence hall restrooms with hand dryers.

## PARKING GARAGE

- Light Emitting Diode (LED) type lights will be installed throughout the garage along with a daylight harvesting control system, which shuts off lights in areas of the garage when a sensor detects enough natural sunlight to adequately illuminate the interior. Combined, these measures will reduce lighting energy by 60 percent over more traditional lighting systems.
- By using pervious paving materials and replacing some formerly paved sections with grass, SU has increased the site's perviousness by 15 percent, decreasing storm water runoff.
- The garage is being constructed in a pre-developed area, limiting sprawl.
- The garage's roof will be made from white concrete, allowing light to reflect instead of being absorbed, reducing heat island effect.
- 100 percent of the waste concrete created during construction will be recycled.
- SU is providing six parking spaces with recharge stations for electric vehicles and is creating the infrastructure to easily add more spaces as the demand grows.
- 100 percent of all concrete (over 1,085 tons) and metal (over 62 tons) from pre-existing buildings demolished to make way for the parking garage has been recycled.
- At least 60 percent of all materials used to construct the garage have been purchased locally, requiring less fuel and fewer emissions for shipping.
- Plans for the garage include a new campus telecommunications hub, eliminating the requirement for construction of a similar hub in a less developed area.
- SU is investigating reserving up to 5 percent of the garage's capacity—roughly 40 parking spaces—for low-emitting and fuel-efficient vehicles (hybrids) and/or carpool vehicles.



## DINING SERVICES

- A golf cart-sized vehicle was purchased to be used instead of a full-sized van for smaller-volume deliveries and pick-ups of food and supplies around campus, saving fuel.
- All coolers in the Gull's Nest dining operation are changing from water-cooled to air-cooled condensers. This will save water continuously used to cool current refrigerated units.
- Lighting has been replaced with energy-efficient fixtures in the Commons and retail operations of Dining Services and the SU Bookstore.
- Cardboard boxes are separated from other trash and disposed of in a specified container to be sent for recycling.
- Delivery pallets are returned to purveyors for reuse instead of being sent to a land fill.
- Motion detectors in offices throughout the Commons building turn off lights when they detect that a space is not being occupied.
- Timer and temperature-change sensors were installed on air conditioning and heating units to adjust temperature by demand and usage.
- Frozen/refrigerated units are turned off or consolidated during summer and downtimes to reduce energy use and lower inventory.
- Financial and correspondence information is saved electronically to eliminate unnecessary usage of paper.
- Napkins are placed on tables in dining halls instead of in food service areas so students may use only what they need instead of taking handfuls from a centrally located counter that they may or may not use.
- Traditional toasters have replaced conveyor-style bagel toasters in many dining areas. The conveyor-style toasters must remain on constantly, while the traditional toasters may be turned on only when needed.
- SU currently gives its used cooking oil to a local processor for use in making chicken feed. The University is investigating the feasibility of a campus biodiesel production facility that would instead transform the used oil into fuel for University vehicles and lawnmowers.

## STUDENT INITIATIVES

- In 2009 SU students again joined more than 400 colleges and universities throughout the U.S. in competing to see who could produce the most recycling through the national RecycleMania program. During the 10-week competition, SU students recycled 5.15 tons of material including glass, aluminum, plastic, paper and cardboard—a 20% increase from the previous year.
- SU students participate in many campus organizations dedicated to protecting and preserving the environment, including Bio Environs, the Environmental Health Club, Environmental Students Association and the Student Sustainability Club.
- Each year the Student Government Association hosts Earth Day festivities on campus.
- An online suggestion box allows students to share sustainability ideas with campus officials without using paper.
- SU's Residence Life and Human Resources offices, Residence Hall Association and Ward Museum of Wildfowl Art joined forces to celebrate Campus Sustainability Day on October 22, 2008, prompting students, faculty and staff to attend a free Webinar, offering environmentally friendly student volunteer activities at the Ward Museum and spreading environmental messages throughout campus.

## PHYSICAL PLANT

- SU mandates that contractors recycle carpeting removed from campus buildings.
- Maryland requires 75 percent of new vehicle purchases be flex-fueled or hybrid; 100 percent of SU's new-car purchases since 2007 have been flex-fueled.
- All new utility vehicle purchases for the University are battery operated.
- SU partners with Pepco Energy Services, Inc. and the Maryland Department of General Services in a campuswide initiative that will save water equal to the annual consumption of 473 family homes, electricity sufficient to power 1,600 homes and reduce emissions equal to removing 1,571 cars from the road or planting 2,145 acres of trees, all

while saving the University an estimated \$6 million over the next 15 years. The partnership provided a cost savings of \$331,378 in its initial year.

*Highlights include:*

- Replacement of more efficient mechanical equipment in 14 campus buildings;
- Installation of tens of thousands more energy efficient bulbs and lighting fixtures and installation of energy "misers" on vending machines;
- Upgrading some 1,700 plumbing fixtures to conserve 11,000 gallons of water annually; and
- Using renewable energy sources to supply at least 5 percent of SU's power.

## OTHER INITIATIVES

- By signing the American College and University Presidents Climate Commitment, SU President Janet Dudley-Eshbach joined more than 400 other college and university presidents nationwide in the fight against global warming by pledging to move SU toward climate neutrality.
- SU recently contracted with Tandus, a Georgia-based floor covering company, to re-carpet Blackwell Library. Carpet removed from Blackwell was recycled into other Tandus products, and the library's new carpet was made partially from recycled carpet from other facilities. This type of recycling is now standard in all of SU's carpeting Requests For Proposals.
- During a recent renovation project in Fulton Hall, SU piloted a program using non-volatile organic compound paint, which provides better air quality when compared to paints used in the past.
- In both the renovation of four of the University's residence halls and the construction of its new student housing and retail complex, SU is seeking silver LEED certification.
- In summer 2008, SU's Ward Museum of Wildfowl Art battled high energy use by implementing a program through which energy cost savings over the same period in 2007 were transferred into shared bonuses for staff members. In its initial month alone, energy use decreased by one-third.
- Paper purchased for office use is made of 30 percent recycled materials and then recycled itself.
- SU is investigating replacing the boilers in Maggs Physical Activity Center with high-efficiency boilers. To support the new boilers, variable frequency pump drives and associated control valve replacement, the Maggs Center would need approximately \$400,000 in HVAC upgrades.

## ACADEMICS

- Environmental Issues Program continues to thrive.
- SU philosophy students collect vegetable garbage from their homes, residence halls and Commons dining hall for a compost pile on campus.
- Under the direction of Dr. James Hatley, philosophy students have planted on campus a wildlife garden to attract insects and small animals, an organic garden and a self-watering rain garden.
- Students in Dr. Joan Maloof's environmental literacy class are studying sustainability measures in SU's daily operations using the Association for the Advancement of Sustainability in Higher Education's Sustainability Tracking, Assessment and Rating System.
- Dr. Maloof's students also have presented ideas for the U.S. Environmental Protection Agency's "P3: People, Prosperity and the Planet" grant competition. Through this program, the EPA challenges college students to come up with better designs for sustainability.
- Under the direction of Dr. Stephen Adams, management and marketing faculty, and John Hickman, executive director of the Small Business Development Center at SU, students conducted a semester-long carbon study of the campus. As the second university system in the United States to require its campuses to conduct such studies (California was the first), the University System of Maryland asked planners to present their findings during a system-wide meeting. SU was the only university to conduct a study using its own students exclusively.
- Students in Dr. George Whitehead's environmental psychology class have received hands-on instruction, creating and installing bluebird boxes at Pemberton Historical Park in Salisbury.
- Dr. Shawn McEntee of the Sociology Department hopes to take the environmental initiative even further, drafting a plan for SU to grow its own vegetables to be served in the dining hall.
- Students have conducted environmental research abroad in Honduras with Dr. Laura Marasco of the Education Specialties Department and in India with Dr. Michael Lewis of the History Department.
- Since 2005, SU has partnered with the Newton Marasco Foundation to present the Green Earth Book Awards, the first prize in the United States lauding authors of environmentally friendly children's literature.
- The Maryland Department of the Environment has hired Dr. Michael Scott and other researchers from the Eastern Shore Regional GIS Cooperative at SU to locate and identify some 420,000 septic systems statewide. MDE will use the data to identify failing septic systems in areas that critically impact the Chesapeake Bay.
- Students in Drs. Danny Ervin and Tylor Claggett's classes in the Economics and Finance Department have studied alternative energy sources and received a hands-on lesson at the Atlantic County Utilities Authority (ACUA) renewable energy and environmental protection facilities near Atlantic City, NJ.
- In 2007 SU hosted the first ShoreEnergy Renewable Energy Conference, encouraging elected officials and business leaders to take a closer look at bio-fuels, wind power, geothermal energy, solar energy and nuclear power.



**Salisbury**  
UNIVERSITY

[www.salisbury.edu/president/sustainabilityinitiatives](http://www.salisbury.edu/president/sustainabilityinitiatives)

Updated 4/30/09

# SUSTAINABILITY INITIATIVES

## AT SALISBURY UNIVERSITY



Salisbury University actively considers environmental concerns in all of our operations. From our 29-year-old recycling program to our careful planning of new campus facilities, SU's commitment to sustainability is a major part of our overall master plan. With our recent partnership to cut energy usage over the next 15 years, the Maryland Board of Public Works lauded SU for our creativity and leadership in the area of conservation. I commend our students, faculty and staff for their ongoing and vigilant efforts to help lessen our burden on the environment. I am excited to see the bright tomorrow they are helping to ensure for future members of the SU community.

*Janet Dudley-Eshbach*

Janet Dudley-Eshbach, Ph.D.  
President

