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EDUCATION AND RESEARCH

I. BACKGROUND

Salisbury University is committed to carbon neutrality and other sustainability goals. To date, most of the University's efforts have focused on physical plant and building operations, including two LEED-certified building projects as well as campus-wide lighting replacements and other improvements. Given the core mission of the University, it is imperative that sustainability is equally well integrated into our educational and scholarship efforts.

Salisbury University has several academic and research programs that directly relate to sustainability and climate issues. These include the Eastern Shore Regional GIS Cooperative (www.esrgc.org), Shore Energy (www.salisbury.edu/shoreenergy), the Bacterial Source Tracking Lab (www.salisbury.edu/biology/bstl), and research on smart growth (Geography and Geosciences Department), biofuels (Biological Sciences Department), local sustainable agriculture (Sociology Department), and sustainable land-use in the Brazilian Amazon (Economics and Finance Department). Academic programs that currently focus on sustainability include the environmental issues major and minor, the dual-degree program in biology and environmental/marine science,⁶ and the environmental/land-use planning and Earth and atmospheric science tracks in the geography major. The Green Floor is an SU Living-Learning Community within Student Housing and Residence Life that focuses on sustainability issues and actions toward achieving them. University Research Services regularly searches for grant funding opportunities pertaining to green or sustainability initiatives that could benefit SU. In addition, SU partners with the Newton Marasco Foundation to host the Green Earth Book Awards each spring. The Green Earth Book Awards honor children's and young adult books that focus on environmental sustainability. Last year, as part of the Green Earth Book Awards activities, the Newton Marasco Foundation presented SU President Janet Dudley-Eshbach with its first Leading Environmental Sustainability Award for her commitment to sustainability.

⁶ *Dual-degree program between Salisbury University and the University of Maryland Eastern Shore.*

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In addition to hosting academic programs that focus on sustainability and environmentalism, we need to infuse a focus on carbon neutrality throughout the curriculum and in our research and creative scholarship. Such efforts will not only allow SU to reduce its climate impacts, but also it will better prepare our students for employment in the green economy and to lead more sustainable lives.

II. APPROACH

To develop its recommendations and goals, the Climate Action Plan Education and Research sub-committee consulted the University of Maryland College Park's Climate Action Plan Workgroup and closely followed many of its recommended actions and implementation plans.⁷ SU also examined Climate Action Plans, as available, from performance peers to learn more about approaches implemented at comparable comprehensive institutions.

Achieving carbon neutrality will depend on the concerted and coordinated efforts of students, faculty, and staff, and thus will require effective communication so that members of the SU community can better understand the climate implications of campus activities. Further, it is essential that campus community members are aware of and committed to SU's Climate Action Plan and support its seamless integration into all University activities.

Information Sharing: To maximize information sharing, the Climate Action Plan Workgroup will develop and post inventories of existing courses, research projects, library resources, and research centers that substantially focus on carbon neutrality, sustainability, or climate issues. Further, the group will develop a resource for interested students and faculty which lists potential projects and research questions relevant to SU's carbon footprint and other sustainability impacts. Finally, to allow members of the SU community to monitor their collective progress on achieving carbon-neutrality goals, the group will develop a Sustainability Dashboard with direct and indirect indicators of carbon/climate impacts.

Education: The strategies that follow focus on integrating carbon neutrality and sustainability in the curriculum so that all students have a basic understanding of sustainability issues and how to function as an environmentally responsible citizen. Further, a diverse array of

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⁷ See UMCP CAP, available at <http://acupcc.aashe.org/cap-report.php?id=278>.

opportunities will be provided to students interested in gaining deep knowledge of and taking action toward these issues. Specifically, this plan recommends creation/expansion of activities targeted at first-year students, engaging students in academic work and research projects related to sustainability topics, emphasizing the strong connections between the proposed Climate Action Plan and SU's existing General Education principles and goals; expanding academic programming related to sustainability, including strengthening resources for SU's environmental issues program; and providing regular training and other programming about carbon/climate and sustainability issues to the SU and greater Salisbury communities.

Research: This plan recommends two primary strategies to enhance the sustainability in the University's research and creative scholarship activities. First, SU will support and encourage research and creative scholarship related to carbon neutrality and sustainability. This might include research on campus needs (e.g. cost/benefits of "alternative" energy, solar heating) and on-going efforts (e.g. reductions achieved through the Henson Challenge), or sustainability more generally (e.g. local food movement). Second, SU, through the efforts of University Research Services, Blackwell Library, and the Office of Sustainability and Environmental Safety, will support the incorporation of sustainability in the responsible conduct of research (RCR).

Benefits of Implementing Actions Recommended for Education and Research: These strategies have several benefits, many of which may be difficult to measure directly. However, baseline data on appropriate indicators would prove useful in assessing reductions achieved through these collective efforts, which then can be displayed in the dashboard as described in the following chart (Table 13).

III. EDUCATION AND RESEARCH STRATEGIES

Table 13: Education Strategies

<p>Action</p> <p>1.0 Information Sharing</p> <p>1.1 Make education- and research-related resources related to climate change, energy efficiency, and sustainability accessible to all members of the SU community.</p> <p>Implementation Mechanism</p> <ul style="list-style-type: none">• To ensure access to educational and research programs, create and maintain a campus-wide course and program inventory available through SU’s Sustainability Web site. (Appendix IV – To be posted online January 15, 2010)• To ensure access to educational and research materials available through Blackwell Library, create and maintain a resource inventory available through SU’s Sustainability Web site. (To be posted online January 15, 2010) <p>Timing</p> <ul style="list-style-type: none">• FY 2010 <p>Cost</p> <ul style="list-style-type: none">• Done
<p>Action</p> <p>1.2 Direct student and faculty projects to address campus-relevant research questions and service projects.</p> <p>Implementation Mechanism</p> <ul style="list-style-type: none">• Develop a wiki of potential term paper topics, class projects, and research topics to help advance campus carbon neutrality. <p>Timing</p> <ul style="list-style-type: none">• FY2011 <p>Cost</p> <ul style="list-style-type: none">• Time: 40 hrs/yr
<p>Action</p> <p>1.3 Make information about campus carbon and other impacts available on a real-time basis to SU community.</p> <p>Implementation Mechanism</p> <ul style="list-style-type: none">• Develop and routinely update a Sustainability Dashboard with indicators for utilities use, solid waste production, use of green fuels, etc. The Sustainability Dashboard will allow for intra- and inter-annual comparisons and may drill down to school or other unit level. <p>Timing</p> <ul style="list-style-type: none">• FY2011 <p>Cost</p> <ul style="list-style-type: none">• Time: 80 hours set-up, 50 hours per year thereafter.

Action

2.0 Education

2.1 Educate first-year students about sustainability so that they have a foundational understanding of the issues and SU's carbon neutrality efforts.

Implementation Mechanism

- Expand First-Year Seminar courses, Living-Learning Communities (LLCs), or Freshman Interest Groups (FIGs) that focus on sustainability or carbon neutrality.
- Support campus speakers on sustainability issues, particularly for campus-wide, first-year student events like convocation and the New Student Reader program.

Timing

- Fall 2010

Cost

- \$80,000 annually

Action

2.2 Encourage service learning, thematic learning clusters, and beyond classroom learning (e.g. Fulton School course enhancements, laboratories) toward carbon neutrality and sustainability topics.

Implementation Mechanism

- As described in 1.2, develop a wiki of potential term paper topics, class projects, and research topics to help advance campus carbon neutrality. Provide advice to students and faculty as needed (e.g., sources of campus data, key contacts, etc).

Timing

- FY2011

Cost

- Time: 40 hrs/yr

Action

2.3 Emphasize connections between carbon neutrality/sustainable habits and SU's Learning Principles and Student Learning Goals by integrating themes of sustainability throughout various disciplines and courses.

Implementation Mechanism

- SU Climate Action Plan shared with campus community through faculty development day or other appropriate venue. Emphasize connection between carbon neutrality and SU's Learning Principle of "demonstrates global awareness in order to function responsibly in an interdependent world" and Student Learning Goal "Social Responsibility - ... disposition toward responsible citizenship and a connection to the community."
- Provide support for inclusion of carbon neutrality/sustainability themes in existing and new courses.
- Emphasize the utility of liberal arts education and multidisciplinary approaches to study of the environment and sustainability.
- Investigate opportunities for sustainability-themed international exchange programs.
- When not obvious, work with academic department to determine how sustainability could be incorporated into their curriculum.

Timing

- Within two years

Cost

- TBD

Action**2.4 Strengthen resources for SU's burgeoning environmental issues program.****Implementation Mechanism**

- One of the fastest growing majors on campus is environmental issues, yet this program does not have formal shared appointments of faculty or operating or library budgets (space was recently assigned to the program). To allow this program to meet current and future student demand, allocate resources to formally establish shared appointments (covering half-time release from home departments), provide for an operating budget comparable to other departments; and plan of continuity of leadership and adequate administrative support to move program to department status.

Timing

- Within three years

Cost

- TBD

Action**2.5 Provide training for SU and greater Salisbury communities on a variety of carbon neutrality and sustainability topics****Implementation Mechanism**

- Implementation to be led by SU Office of Sustainability and Environmental Safety with input from VPs of Academic Affairs, Student Affairs, and Finance and Administration.

Timing

- Within three years

Cost

- TBD

Action**2.6 Reduce use of paper and other resources used in teaching and learning, without negatively impacting quality of either.****Implementation Mechanism**

- Increase faculty facility with and use of electronic tools for teaching, learning and committee work (e.g. MyClasses, podcasts, streamed video).

Timing

- Within three years

Cost

- TBD



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Providing avenues to recognize, celebrate, and promote campus education and research projects focused on sustainability issues is an important part of the Climate Action Plan.

Action

3.0 Research

3.1 Foster research and creative scholarship on sustainability.

Implementation Mechanism

- The University will maintain and publish a list of potential climate action items (e.g. use of geothermal, green roof, or biofuels technologies on campus) that may help reduce campus emissions and for which insufficient data or research are available to guide decisions (see 1.2 above).

Timing

- FY10

Cost

- Time: 40 hrs

IV. SUGGESTED COMMUNICATIONS AND OUTREACH

Providing avenues to recognize, celebrate, and promote campus education and research projects focused on sustainability issues is an important part of the Climate Action Plan. The SU Climate Action Plan will include the promotion of such projects, to the campus and broader communities, through articles in University publications, through special campus recognitions and awards, and through news releases to local news sources. The Office of Sustainability and Environmental Safety will serve as a conduit and as a resource for students, faculty and staff interested in sustainability issues on the SU campus.

FINANCING THE PLAN

The cost for some of the projects proposed in this plan cannot be determined until an evaluation is performed by engineers and specialists. For each, a cost/benefit analysis should be performed before any decision to move forward might be made. As previously stated, purchasing certified carbon offsets will only be considered when all other emission-reduction strategies have been evaluated and administrative policy supports such a purchase.

The University, of course, will need to determine the importance of these projects as compared with other strategic initiatives of the campus. SU should consider the development of a Campus Sustainability Fund, which might include revenue generated from donations by corporations, benefactors, alumni, faculty, and staff in order to provide support for some of the proposed strategies.