

CLIMATE ACTION PLAN 2014-2017



Salisbury University: A Maryland University of National Distinction

Table of Contents

Background	1
Greenhouse Gas Emissions	1
Greenhouse Gas Summary	1
LEED Projects 2010 to 2013	2
Additional Accomplishments	3
Goals 2014 - 2017	4
University Sustainability Committee and Climate Action Plan Subcommittee.....	6

Salisbury University Climate Action Plan



Climate Action Plan 2014-2017

Background

The Climate Action Plan (CAP) was initiated in 2007 when Salisbury University President Janet Dudley-Eshbach signed the Presidents' Climate Commitment, a pledge that Salisbury University would embark on a path toward climate neutrality. Released in 2010, the CAP provided a roadmap for the SU campus to reduce carbon emissions to a net of zero and achieve carbon neutrality by the year 2050. Implementation of the CAP and related sustainability initiatives is guided by the University Sustainability Committee (USC). The USC was established by President Dudley-Eshbach in 2008 and is a team comprised of students, faculty and staff representing schools and departments from across the campus.

This 2014 update does not repeat all of the elements presented in the 2010 document, which is available in PDF format online at: www.salisbury.edu/sustain/campus/climateactionplan.html. Instead, this document focuses on the progress of the CAP effort during the first four years and adjustments to the CAP moving forward. As stated in the 2010 CAP, this is a living document that will be revisited on a regular basis to reflect successes and lessons learned along the way.

Greenhouse Gas Emissions

In 2008, a group of students from Salisbury University's Small Business and Technology Development Center (SBTDC) and the Business, Economic and Community Outreach Network (BEACON) conducted a comprehensive inventory of greenhouse gas emission sources in accordance with the requirements of the Presidents' Climate Commitment. The scope of the inventory included collecting data associated with electricity, fuel combustion, commuting, air travel, fleet vehicles, solid waste, refrigerants and certain other chemicals associated with global warming. The greenhouse gas (GHG) inventory, also referred to as a "carbon footprint," was developed using the Clean Air-Cool Planet (CA-CP) Campus Carbon Calculator tool, which converts GHG data into metric tons carbon dioxide equivalent emissions, or MTeCO₂.

Emission data from FY05 was selected as the baseline from which progress toward carbon neutrality would be measured. In large part, FY05 data was selected because Maryland energy reduction requirements also use FY05 as the baseline. Interim milestones for emissions were established as follows:

15%	2012
25%	2015
30%	2020
50%	2025
100%	2050

Greenhouse Gas Summary

In fiscal year 2012, there was a net reduction of 2,027.38 metric tons of carbon dioxide equivalent greenhouse gases, which represents a 7.6 percent reduction in comparison to the 2005 baseline emissions. While the 7.6 percent GHG emission reduction appears modest, campus enrollment increased by 25.6 percent during this period and total building square feet increased by 52.7 percent. This normalized data affirms a significant improvement in building energy efficiency as a result of the comprehensive housing renovation projects and new construction to LEED Silver or Gold levels.

Greenhouse Gas Summary Chart

Fiscal Year	GHG Emissions (MT)	Baseline Change (MT)	Percent Change (MT)	FTEs Enrollment	Total Building Square Feet
2005	26678.00	N/A	N/A	6277	1444989
2008	26413.62	-264.38	-.99%	7074	1444989
2010	24841.62	-1836.38	-6.88%	7747	1871731
2011	26672.62	-5.38	-.02%	7716	1889463
2012	24650.62	-2027.38	-7.60%	7881	2206748

Normalized Comparison to Baseline

- Change in GHG emissions per 1,000 sq.ft. building space: -39.50%
- Change in GHG emissions per full-time enrollment (FTE): -26.35%



Climate Action Plan Accomplishments

LEED Projects 2010 to 2013

Pocomoke Hall (2010) – This major renovation project was constructed in accordance with U.S. Green Building Council guidelines and was awarded LEED Gold certification. Some notable project features include a high-efficiency HVAC system, water and energy conserving fixtures, daylight harvesting automated lighting controls, a green housekeeping program and 75 percent recycling of construction waste.

Manokin Hall (2010) – This major renovation project was constructed in accordance with U.S. Green Building Council guidelines and was awarded LEED Gold certification. Some notable project features include a geothermal HVAC system, geothermal domestic hot water, water and energy conserving fixtures, daylight harvesting automated lighting controls, a green housekeeping program and 75 percent recycling of construction waste.

Wicomico Hall (2011) – This major renovation project was constructed in accordance with U.S. Green Building Council guidelines and was awarded LEED Gold certification. Some notable project features include a geothermal HVAC system, geothermal domestic hot water, water and energy conserving fixtures, daylight harvesting automated lighting controls, a green housekeeping program and 75 percent recycling of construction waste.

Nanticoke Hall (2011) – This major renovation project was constructed in accordance with U.S. Green Building Council guidelines and was awarded LEED Gold certification. Some notable project features include a geothermal HVAC system, a solar domestic hot water, stormwater recovery and reuse for irrigation, a sustainability education kiosk, water and energy conserving fixtures, daylight harvesting automated lighting controls, a green housekeeping program and 75 percent recycling of construction waste.

Sea Gull Square (2011) – This building was constructed in accordance with U.S. Green Building Council guidelines and was awarded LEED Silver certification. Some notable project features include high-thermal-efficiency glass, reserved spaces for low-emitting and hybrid vehicles, stormwater capture and infiltration system, indoor bicycle storage area, water and energy conserving fixtures, daylight harvesting automated lighting controls, a green housekeeping program and 75 percent recycling of construction waste.

Perdue Hall (2011) – This building was constructed in accordance with U.S. Green Building Council guidelines and was awarded LEED Gold certification. Some notable project features include four electric car charging stations, a geothermal HVAC system in the Perdue Museum, a sustainability education kiosk, water and energy conserving fixtures, daylight harvesting automated lighting controls, a green housekeeping program and 75 percent recycling of construction waste.

Chester Hall (2012) – This major renovation project was constructed in accordance with U.S. Green Building Council guidelines and is seeking LEED Gold certification. Some notable project features include installation of an HVAC energy recovery system, improved indoor air quality, water and energy conserving fixtures, daylight harvesting automated lighting controls, a green housekeeping program and 88 percent recycling of construction waste.

Choptank Hall (2013) – This major renovation project was constructed in accordance with U.S. Green Building Council guidelines and is seeking LEED Gold certification. Some notable project features include installation of an HVAC energy recovery system, improved indoor air quality, water and energy conserving fixtures, daylight harvesting automated lighting controls, a green housekeeping program and 88 percent recycling of construction waste.



Additional Accomplishments 2010 to 2013

The Princeton Review included SU in the *2013 Guide to Green Colleges*, the fourth consecutive year Salisbury University has received this accolade for teaching and demonstrating environmental responsibility. Salisbury University is also an active participant in the College Climate Action Group along with representatives from 19 other Maryland schools to discuss ways to reduce greenhouse gas emissions. The Climate Change Division of the Maryland Department of Education's Air and Radiation Management Administration created the panel.

Beginning in January 2012, Salisbury University initiated a food waste composting program, which engaged the services of a local company, Blue Hen Organics. The composting program reduced waste sent to the landfill by 304 tons in FY12. The conversion of this material into a soil amendment represents a 30 percent reduction in the total amount of landfilled material over FY11.

In an effort to reduce plastic bottle waste on campus, campus students requested water bottle filling stations. A pilot project was initiated in fall 2011. Due to the favorable reception by students, faculty and staff, the program has been expanded to 22 filling stations across campus, and additional locations will be developed as budgets allow.

The University marked a milestone in its recycling program in 2012. The campus achieved a 51 percent recycling rate, up from 27 percent in 2011. This dramatic increase is credited to a combination of the Student Government Association's aggressive Recycle Madness campaign, Residence Life's participation in Recycle Mania and a 30 percent decrease in solid waste attributed to the composting program.

Motorpool has acquired 10 hybrid vehicles and, based on the fuel efficiency and reliability of these vehicles, plans to continue to purchase hybrids as older vehicles are replaced. University Police reported an average increase from 10 to 20 miles per gallon using their hybrid police vehicle compared to a traditional police vehicle.

Salisbury University joined with the City of Salisbury and Bike SBY, a community group, to develop a bike path that connects the campus with the Salisbury Downtown Plaza. Leveraging funds from Salisbury University and Sea Gull Century, Bike SBY was able to secure matching funding from the Maryland Department of Transportation. Termed the "Orange Route" by Bike SBY, the path is the first phase of a formal plan to develop better and safer connectivity for community cyclists. The Orange Route officially opened on September 5, 2013.

Salisbury University's non-recyclable materials are disposed at Newland Park Landfill. Wicomico County has an agreement with Ingenco to use methane gas from the Newland Park Landfill to

produce renewable energy. In an effort to offset the carbon emission from the decomposition of this trash, the University has committed to purchase 8,000 renewable energy credits (RECs) produced at the landfill in 2013. The estimated landfill gas being destroyed to produce 8,000 RECs is the environmental equivalent of the annual greenhouse gas emissions from 7,552 passenger vehicles, the carbon dioxide emissions from burning 210 railcars of coal or the energy benefit of powering 539 homes.

Salisbury University has developed and expanded several academic and research programs that directly relate to sustainability and climate issues. These include the establishment of the Department of Environmental Studies and related faculty hires; development of the Blackwell Library Sustainability Research Guide (www.salisbury.libguides.com/sustainability); several new courses and a sustainability-related course list; expansion of SU's Green Living-Learning Community and clubs and organizations related to sustainability; growth of research and outreach centers like the Eastern Shore Regional GIS Cooperative (www.esrgc.org) and Shore Energy (www.salisbury.edu/shoreenergy) and research programs on smart growth, biofuels and sustainable agriculture and land-use; and an assessment of and recommendations for the campus relative to AASHE's STARS criteria (conducted by environmental studies students as their capstone experience).

Salisbury University's Residence Life and Sustainability offices purchased and installed four bicycle Fixit stations on campus. Each Fixit station includes all the tools necessary for cyclists to perform basic repairs and maintenance. There is also a quick read (QR) code to access detailed maintenance instructions on smart phones.

In 2013, the Maryland Department of the Environment recognized Salisbury University with the Maryland Green Registry Leadership Award. Each year, the award is presented to a K-12 or higher education organization that demonstrates a commitment to environmental performance, a green team that meets regularly, annual environmental goals and measurement of results.



Climate Action Plan (2014-2017)

Goal 1: Develop administrative policies to facilitate sustainable operations on campus

- 1. Develop a procurement sustainability policy.**
 - a. Establish a standard for paper recycle content.
 - b. Purchase of Energy Star appliances.
 - c. Purchase of EPEAT electronics.
 - d. Make environmentally preferred purchases.
 - e. Advocate teleconferencing for distance meetings.
- 2. Develop a green housekeeping policy.**
- 3. Develop a low-emission/high-mileage fleet vehicle policy.**
 - a. Provide vehicle user education.
 - b. Develop an “environmentally preferred” list for new vehicle purchases.
 - c. Evaluate available alternatives annually.
- 4. Support student fundraising initiatives and related student green fund.**
 - a. Provide institutional support for fund management and award process.
 - b. Provide financial assistance for larger projects that are aligned with Strategic Plan goals and institutional commitment to climate neutrality.
- 5. Investigate the feasibility of a telecommuting work policy.**

Goal 2: Increase campus building efficiency and reduce carbon footprint from campus operations

- 1. Improve efficiency of campus buildings.**
 - a. Perform building energy audits.
 - b. Participate in energy performance contract(s).
 - c. Re-commission buildings.
 - d. Ensure new construction and renovations are LEED certified (or equivalent).
 - e. Increase efficiency with replacement/new equipment.
 - f. Increase efficiency with campus computer operations.
- 2. Develop approaches for sustainability behavior modification.**
 - a. Develop an education campaign for carbon footprint awareness and overall water consumption reduction.
 - b. Explore building and/or departmental energy monitoring.

- 3. Increase renewable energy use.**
 - a. Identify regional source(s) for renewable energy.
 - b. Develop strategy for increasing purchases of renewable energy.
- 4. Develop campus-based renewable energy generation.**
 - a. Utilize solar parking canopy(s).
 - b. Install roof-mounted solar/solar farm(s).
 - c. Incorporate renewable energy in new construction and renovations.
 - d. Develop additional geothermal HVAC systems.
 - e. Install wind turbine(s) on campus.
 - f. Evaluate micro-turbine technology for campus applications.
 - g. Consider/explore changing technologies in electricity distribution systems (example: microgrids).
 - h. Consider new and alternative technology for campus demonstration projects.

Goal 3: Continue to reduce solid waste and increase the campus recycling rate

- 1. Reduce solid waste generated by campus operations.**
 - a. Collaborate with Housing to limit waste from move-in and move-out.
 - b. Collaborate with the University Bookstore to reduce waste from sales and purchases.
 - c. Collaborate with Athletics to increase recycling at home events.
 - d. Expand reuse opportunities for good-condition items.
 - e. Identify and promote opportunities for vendor “take backs.”
 - f. Investigate a “zero waste” option for campus.
- 2. Increase recycling rate on campus.**
 - a. Increase participation in Recycle Mania and Recycle Madness.
 - b. Collaborate with Housing to improve recycling rate among residents.
 - c. Improve accessibility to recycling containers.
 - d. Explore an option for departmental recycling rate awards/recognition.
 - e. Audit the campus waste stream for recycling opportunities.
- 3. Expand the scope of the composting program.**
 - a. Collaborate with Dining Services to include compostable containers and composting at satellite operations.
 - b. Collaborate with Dining Services and Athletics to include compostable containers and composting at athletic events.

- c. Collaborate with Dining Services and Facility Reservations to include compostable containers and composting at conferences and events.
- d. Add composting availability for the Sea Gull Century event.
- e. Audit the housing waste stream for recycling opportunities.

Goal 4: Expand sustainability education and research opportunities

1. Expand sustainability-related curricula and degree programs.

- a. Establish a campus-wide definition of sustainability, develop sustainability learning outcomes and investigate feasibility of incorporating these into more general SU student-learning outcomes.
- b. Provide adequate support to existing courses and programs and provide incentives for interdisciplinary collaboration on new sustainability courses and/or programs.
- c. Continue to develop environment and sustainability-related courses and programs for pre- and in-service teachers.
- d. Continue to provide a means for students to easily identify sustainability-related courses and research resources.

2. Encourage undergraduate research, service learning, study abroad, peer-mentoring and beyond-classroom experiences.

- a. Continue to foster undergraduate research opportunities and sustainability-related immersive experiences, including study abroad and internships.
- b. Develop and expand sustainability-related service learning, peer-mentoring activities and lecture series.
- c. Actively connect students to sustainability-related campus clubs, traditions and service opportunities.

3. Continue to develop educational resources and information sharing.

- a. Provide centralized resources for sharing activities and outcomes of sustainability-related efforts.
- b. Investigate the feasibility of developing a sustainability technology demonstration center and provide faculty access to energy performance data for use in class activities and research.
- c. Leverage resources available through our affiliation with national organizations to increase sustainability-related academic programming.

4. Educate first-year students about sustainability as a foundation.

- a. Infuse sustainability-related subject matter and activities in the new student orientation.
- b. Expand the Green Living Learning Community capacity and facilitate sustainability-related student interest groups in residence halls for first-year through senior-level students.

- c. Create connections between incoming students and environmental student organizations and traditions.

5. Provide opportunities for discourse and training on climate change and sustainability topics for SU faculty, staff and surrounding community.

- a. Support and expand speaker and film series.
- b. Establish an Academic Subcommittee of the SU Sustainability Committee.

6. Foster sustainability research and creative scholarship.

- a. Continue to provide space and support campus centers and research projects that are involved in sustainability-related projects and renewable energy projects.

Goal 5: Reduce carbon footprint from transportation

1. Enhance public transportation.

- a. Perform a survey of transportation needs.
- b. Track bus locations with a phone app.

2. Enhance bike-friendly campus.

- a. Widen and improve strategic campus pathways.
- b. Develop near-campus bike paths.
- c. Install additional self-service bike repair stations.
- d. Develop a phone app to inform cyclists about campus / community resources that support and encourage cycling.
- e. Develop a bike loan program.
- f. Continue to increase bicycle parking availability.

3. Decrease commuter and travel emissions.

- a. Develop an air travel offset program.
- b. Develop a car travel offset program.

4. Provide incentives for using alternative transportation.

Goal 6: Enhance communications and outreach to the campus and surrounding community

1. Develop sustainability branding and logo.

2. Continue to enhance sustainability website.

3. Develop monthly communications to campus.

4. Develop a self-guided (electronic) sustainability tour.

5. Provide climate change training and dialog to the SU community, K-12, town gown and the surrounding community.

President & Executive Staff

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Climate Action Planning Subcommittee

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