



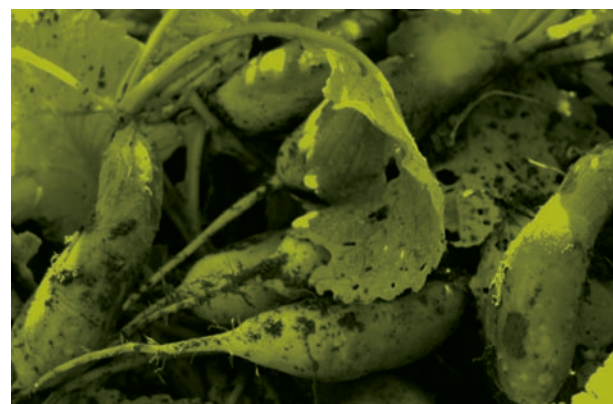
# Blue **AND** Gold **AND**

# GREEN

UNIVERSITY STRIVES TO BE MORE ENVIRONMENTALLY FRIENDLY

By Kim Bower-Spence

MORE THAN THE GREENWAY IS GREEN THESE DAYS. WHETHER IT'S LOW-FLOW SHOWERHEADS IN RESIDENCE HALLS OR STUDENT-GROWN TOMATOES IN THE DINING HALL, THE WILKES UNIVERSITY COMMUNITY IS WORKING TO TREAD A BIT LIGHTER ON THE PLANET.





RESIDENT TIM GILMOUR SIGNED THE American College and University President's Climate Commitment in May 2007. As of October, according to the ACUPCC Web site, 588 presidents had pledged to eliminate their campuses' greenhouse gas emissions over time by:

- Completing an emissions inventory.
- Setting a target date and interim milestones for becoming climate neutral within two years.
- Taking immediate steps to reduce greenhouse gas emissions.
- Integrating sustainability into the curriculum and making it part of the educational experience.
- Making the action plan, inventory and progress reports publicly available.

"Climate neutrality" means emitting no net greenhouse gas. Universities can achieve this by minimizing emissions and using carbon offsets or other measures to mitigate remaining emissions.

Here's a roundup of environmental initiatives on campus.

## TOWARD A SMALLER FOOTPRINT

The first step toward a smaller footprint was an emissions inventory. A "Clean Air Cool Planet Campus Carbon Calculator" was used to model University carbon emissions. The task of tallying went to a subcommittee of the newly formed Wilkes University Environmental Working Group.

The model factored commuter travel, solid waste generation and electricity use, as well as natural gas and other fuel use, according to Marleen Troy, associate professor of environmental engineering and a member of the subcommittee. Purchased electricity was the biggest contributor.

This benchmark will help the University target areas for savings. This could impact class scheduling as managers seek ways to use buildings in a more energy-efficient manner. In the longer term, converting flat roofs to "green" roofs could cut energy required for cooling. This is currently under study by environmental engineering and earth sciences students.

"It's going to be a variety of small things, and I think an increasing awareness of how these little things can make an impact in the long run," Troy says. "We may be more cognizant about shutting lights off in a classroom or in a dorm room."

## A GREEN ROOF FOR STARK

Venture out onto the roof of Stark Learning Center these days, and you'll notice a garden patch of sorts. Since April, plants have occupied a test section of roof on Stark, allowing senior environmental engineering students to study their growth habit and impact on roof temperature. Eventually, they'll measure the system's impact on utility usage.

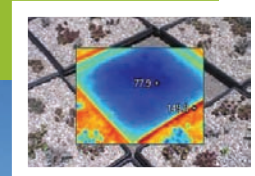
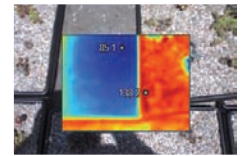
As they learn about green building strategies, they also provide a glimpse of how plants on a campus rooftop can cut energy use at Wilkes by reducing the amount of energy required for cooling.

Four-inch-deep black plastic trays, each 24 inches square, hold a gray growing medium and about five sedum plants of different varieties. The plants mitigate what Troy calls the "heat island effect" of the sun baking flat rooftops and building up heat over time. "This dissipates some heat so you need less energy to cool the building," she explains. It also absorbs and filters rainwater and can create habitat. Existing roofs must be assessed as to whether or not they can handle the extra load. Those who install the systems claim they can extend the life of a roof, she adds.

"It's low-maintenance, other than perhaps to go up and weed it and check it out," Troy explains. Right now, the green roof is simply a learning tool for students. But eventually, Wilkes hopes to explore converting flat campus roofs to green.

Right: A thermal imaging camera shows the difference in temperature between the surface of the growing medium and the roof underneath. PHOTOS COURTESY OF MARLEEN TROY

Below: Brian Whitman, associate professor of environmental engineering, left, reviews the cooling impact of a "green roof" with senior environmental engineering students, from left, Jean Yves Ngabonziza, John Luff, William Garro and Nafissatou Mizin-Yawa. PHOTO BY KIM BOWER-SPENCE





Several faculty and staff members could be found biking to work this summer. From left to right are: Anne Pelak M'98, director of the grants office; John Gilmer, electrical engineering professor; John Koch, professor of mathematics and computer science; Sharon Bowar, associate professor of art; and Matt Zukoski '86, associate professor of mathematics and computer science. PHOTO BY MARK GOLASZEWSKI

## REDUCE AND RECYCLE

From shower heads to compost, from student housing to dining services, the mantra “reduce, reuse, recycle” permeates campus. Robert Swetts, Wilkes manager of capital assets, lists a litany of recycling efforts: from paper and aluminum to electronics and light bulbs. Even lawn waste goes in a special dumpster for composting.

Any building renovations bring greener upgrades, such as insulation, low-flow showerheads and toilets, energy-saving appliances and higher-efficiency heating and cooling systems.

Student Sarah Decesaris wants to rally students to the cause. The junior international studies and political science major is minoring in environmental studies and spearheads a new club on campus called Students for Environmental Sustainability.

The club has met only a couple times but already plans a spring salvage sale to help students recycle unwanted binders, storage bins, microwaves and such at the end of the semester. Decesaris also has her eyes set on increasing use of recycled paper and working with the sustainability coordinator for dining services to cut food service waste.

## GREENER LANDSCAPING

Patty Gilmour, the president’s wife, is contributing her Master Gardener skills to the University’s efforts. She has been deeply committed to environmental sustainability for many years as an accomplished house renovator and a landscaper. As a service to the campus, she has made it her mission to help make campus landscaping “truly green.”

Under her leadership, two major landscaping projects — a new ellipse at the north end of campus and a labyrinth on the greenway across from Breiseth Hall — have been completed using native plants. Native plants attract wildlife, require less

maintenance, water and chemicals, and in many cases provide a place for reflection and contemplation. A pollinator garden next to Fenner Hall is planned for next spring. In addition, she landscaped the north edge of campus, around Farley Library, the Dart Center, Chase Hall, the new facilities building, and the new pottery facility.

Mrs. Gilmour’s long-term goal is to join other U.S. university campuses in becoming designated a National Wildlife Habitat. She is trying to attract wildlife to campus by creating natural habitat that supplies food and shelter. Also on the drawing board is seeking the recently announced Tree Campus USA status.

Mrs. Gilmour hopes to connect students with nature as she adds tables and benches to give them gathering areas outdoors. She says she became aware of the students’ needs after she planted a vegetable garden behind the President’s Residence and many were fascinated by the plants and the idea of growing vegetables.

Mrs. Gilmour has also pressed for an overall reduction in the use of fertilizer, herbicides and pesticides on campus, a reduction in use of costly perennial flowers and plants, and use of plants such as clover that naturally fertilize soil. As a result, the campus is going through a withdrawal of sorts, looking less lush and weed-free than it did when synthetic chemicals were used. Mrs. Gilmour says it will take two or three years for campus turf to reestablish using natural treatments and adapt to less water and chemicals.

Native plants encircle the new greenway labyrinth, made possible by a gift from Trustee William Miller '81. PHOTO BY ©KDP STUDIO



## SPIN VEGGIES

Wilkes put a new spin on gardening this summer, with the establishment of a SPIN farm on campus. SPIN, which stands for Small Plot INTensive farming, is an entrepreneurial organic-based farming system for land areas under an acre in size. It turns the challenges posed by urbanization to the farmer's advantage by capitalizing on limited space and resources.

Wilkes' SPIN farm, called the Fenner Farm, was located at the site of a recently demolished building at the corner of South River and Ross streets. Organizers quickly learned the ups and downs of agriculture. The crops in the original 30-by-70-foot plot failed to mature properly.

Tests of soil and compost revealed low organic matter and nutrient deficiencies, reports Ellen Flint, director of undergraduate education and a farm coordinator. But the Lands at Hillside Farms, in Shavertown, Pa., came to the rescue, offering a site there. Hillside's board gifted the plot to the Wilkes University Fenner Farm in perpetuity. It's now known as the Fenner Farm Annex.

Tomatoes, radishes, squash, potatoes, beets, pumpkins, beans, chard, turnips, salad mix, eggplant and a variety of herbs were sold at Hillside's farm store, as well as to a local restaurant and catering business. Sodexo, which runs campus dining services, was also a customer.

Five students, hired with funds from a grant from the University's Mentoring Task Force, used organic methods to maintain the farm with assistance from sustainable agriculture experts at Hillside.

The campus site was planted to a cover crop for winter to build up the soil nutrient levels in preparation for planting in the spring. Flint says they plan to farm both the Fenner and Hillside plots next year.

From left, Jason Brady, Andy Pressman and Andrew Bookin work at the Fenner Farm Annex. Pressman is an agronomy specialist with the National Center for Appropriate Technology. PHOTOS BY KIM BOWER-SPENCE



## MORE TO COME

These initiatives mark just the beginning, with further initiatives being considered. "Wilkes wants to lead in this important arena," says President Gilmour. "We have outstanding faculty and staff, as well as students, committed to these efforts."

## TOP 3 CAMPUS EMISSIONS TARGETS:

1. Purchased utilities
2. Commuter travel
3. Natural gas use and fuel for generators

*Wilkes University saved the following resources by using Sappi FLO Gloss Cover & Text (FSC), manufactured with 10% post-consumer recycled content:*



- 14 Fully Grown Trees
- 5,083 Gallons Waste Water
- 10 Million BTUs Energy
- 841 Pounds Solid Waste
- 1,551 Pounds Greenhouse Gases

*Environmental impact estimates were made using the Environmental Defense Paper Calculator.  
For more information, visit <http://www.papercalculator.org>.*

