Living Green

-- Nicole Mooradian, '08
--Alden Wicker, '09

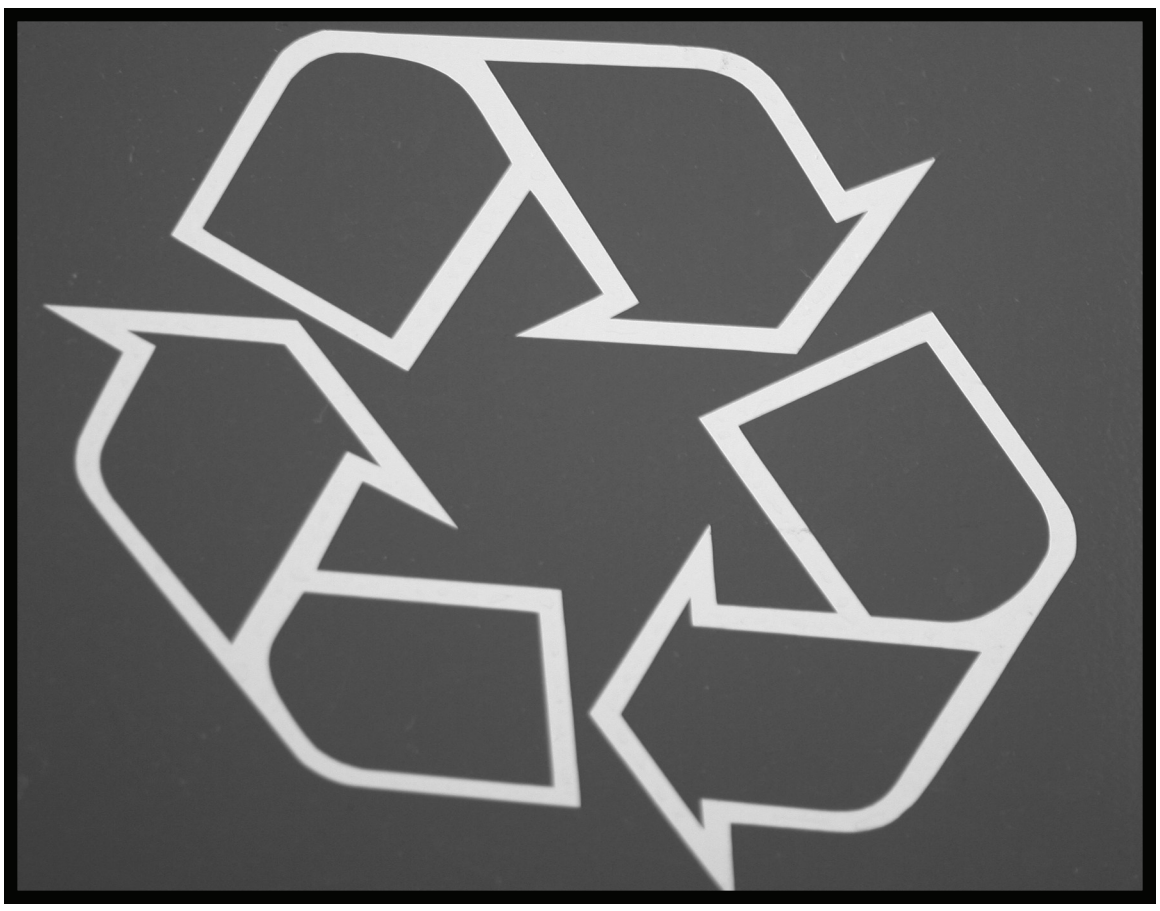
Environmental issues have moved into Washington and Lee University's spotlight in the past few years. Rising energy costs as well as threats of global warming have forced institutions across the country to reconsider more environmentally friendly options. University President Kenneth Ruscio has already expressed his desire for the university to continue efforts to increase sustainability. "It is important for the university as an institution in the community and an institution in society [to] understand that we have to act as a university responsibility," Ruscio said. "What I can do as we plan our future is make sure that we take into account our impact on the environment."

Recycling

The campus recycling program, run by Wise, has existed for nearly 20 years. Students can recycle bottles, cans, and mixed paper in bins across campus. There are additional instructions at http://recycling.wlu.edu. Wise and Facilities Management also have small crates and bins for students to keep in their dorm rooms. Students can request bins from their RAs and DCs.

"A decision was made to go through the RAs and DCs," Wise said.

Nevertheless, Wise believes the school can go further and not just recycle items, but use products made from recyclables. The Printing and Copy Center (PCC) at W&L uses bleached paper not made from post-consumer recycled content, according to the school's environmental audit. About 80 percent of paper on campus contains no recycled material.



Still, the PCC has begun to encourage people to make double-sided copies in an effort to save paper. Facilities Management provides toilet paper and paper towels made with 100 percent recycled content.

Laurence Eaton, project coordinator for environmental studies, appeared to be optimistic. "[I] would love to see recycling embraced by every department," he said

LEED Certification

One method of making campus buildings more environmentally friendly is LEED certification. The Leading in Energy and Environmental Design (LEED) Green Building rating system provides builders with a checklist of standards for environmentally sustainable construction.

W&L currently does not have any LEED certified buildings. Early discussions for the John Elrod Commons and Wilson Hall included potential plans for LEED certification; however, these plans were later abandoned due to budgetary constraints.

Nevertheless, in two years Wilson Hall can be LEED certified as an existing building. Existing Building certification occurs two years after construction is finished, and focuses on how well the building has been maintained.

"[We are] within several points for certification on the building," University Vice President Joe Grasso said. "We're hopeful that we're going to be able to achieve it with Wilson Hall."

Environmental Coordinator Chris Wise agreed. "[LEED certification] would change the way we operate and manage across the campus if we go with it," he said.

Still, the process can be expensive.

According to Wise, building to LEED standards can increase expenses by between two and five percent.

Though the administration would like to see the colonnade buildings renovated to LEED standards, Grasso said that no firm decision has yet been made because of the cost involved.

Ruscio, on the other hand, appeared to believe that the cost can be mitigated by lower energy needs.

"I would like [to] see if we can achieve LEED certification in all of our future buildings," Ruscio said. "You have to take into account future savings."

Other Efforts on Campus

LEED certification and recycling are not the only ways the campus can become more environmentally friendly. Recently, the university hired Ameresco, an energy services company, to assess W&L's efforts at sustainability and see where improvements could be made.

As a result, the school is installing low-flow toilets, energy-saving light bulbs, improved boilers, and new steam traps. The effort cost $2.5 million, but according to Grasso, the project will pay for itself within five years with the reduced energy usage.

Additionally, this fall the university will switch all of its off-road vehicles to run on a partial biodiesel mix instead of gasoline. The geology department will also be purchasing a new van, and, according to Grasso, the van will probably run on biodiesel.

Ethanol, made from corn oil, is just one ingredient in this biodiesel mix. Eventually the campus may make its own biodiesel, Wise said.

Even the new sorority parking lot has a positive environmental effect. The parking lot also serves as a rain garden. When it rains, the water runoff from the lot flows into an area filled with plants that need plenty of water. The plants slow the water runoff into the storm drain as well as prevent excessive sediment from piling up in the drain.

The school also created the Environmental Planning and Management Committee (EPMC) to discuss issues of campus sustainability. The EPMC started during Ruscio's last term here, and continues to grow in influence.

"[The EPMC] has brought the campus together in a big way," Grasso said.

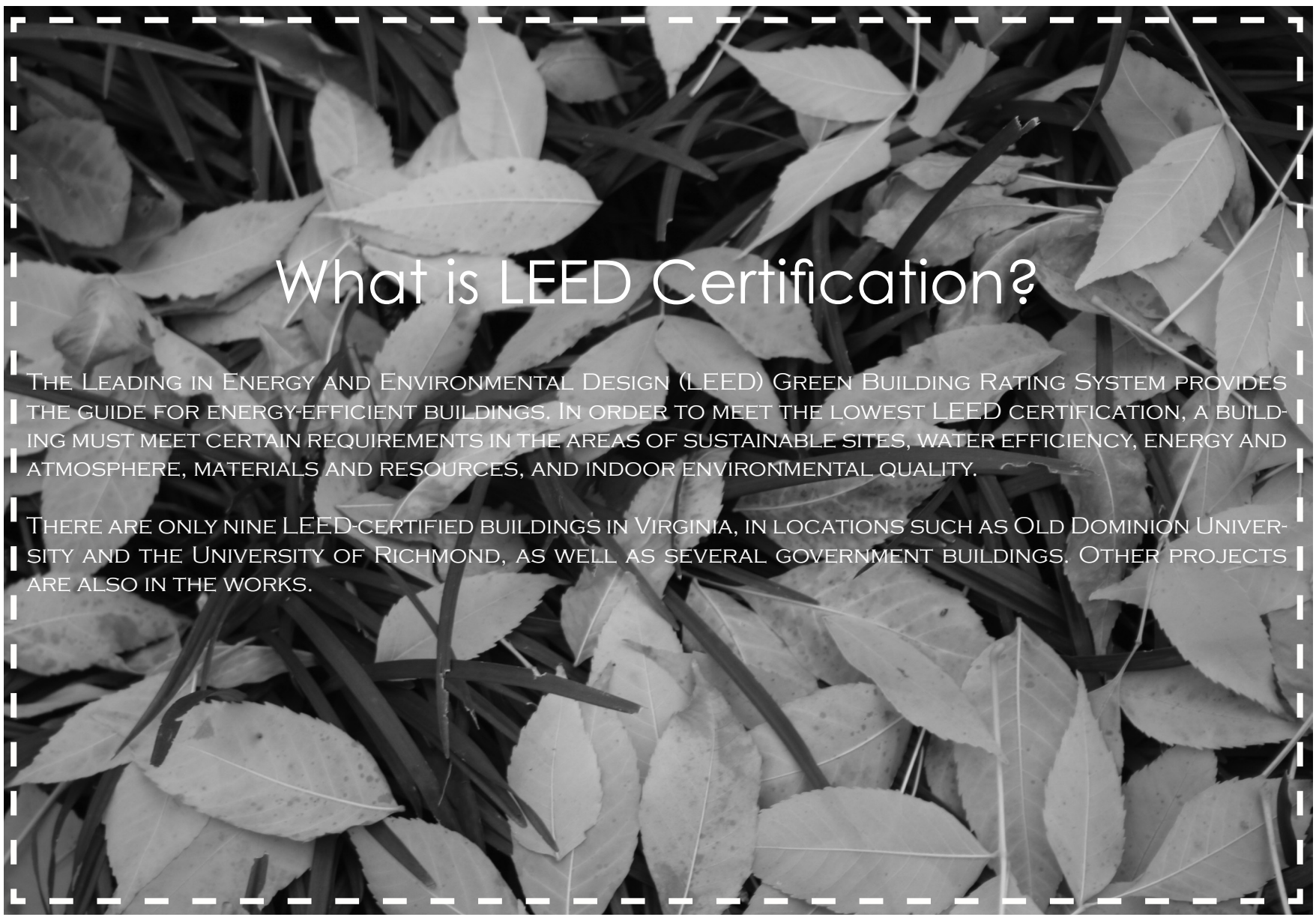
Finally, the Associated Colleges of the South has an intern on campus to help with composting. The "Kompost Krew" takes the leftover food scraps from Dining Services and composts them, eventually using the compost to fertilize plants around campus.

What Students Can Do:

<u>In the dorm…</u>
- Ask for a recycling bin for your own room or for the hall
- Buy printer paper with at least 30% post-consumer recycled content
- Use a whiteboard instead of post-its
- Wash full loads of laundry

<u>Around town…</u>
- Walk to the post office
- Buy from local distributors and avoid the car trip
- Carpool
- Use Traveler to get to off-campus parties
- Visit the Farmers' Market on Wednesdays in the parking lot off Jefferson between Washington and Nelson streets

<u>Off Campus…</u>
- Turn off the lights, printer, computer, etc. when you leave
- Buy Energy Star appliances
- Conserve water
- Keep recycling bins handy for parties.
- Turn down the heat, and up the air conditioning
- Eat healthy; buy organic
- Save money on gas and electric bills: find and seal cracks in windows and doors
- Vote with your dollar
- Buy from environmentally responsible businesses



What is LEED Certification?

The Leading in Energy and Environmental Design (LEED) Green Building Rating System provides the guide for energy-efficient buildings. In order to meet the lowest LEED certification, a building must meet certain requirements in the areas of sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality.

There are only nine LEED-certified buildings in Virginia, in locations such as Old Dominion University and the University of Richmond, as well as several government buildings. Other projects are also in the works.

The Numbers

9.5 million Sheets of virgin paper we use in a year

1,118 Amount of trees the school causes to be cut down every year

$25 Amount Connecticut College students agreed to pay extra for renewable power

$12,500 Amount shutting down computers every night would save the campus a year

$45 Amount school pays to recycle each computer

$6.5 million Amount Harvard has invested in energy conservation projects:

1-2 years Time it takes for projects to pay back in energy savings

$9 million Amount of Energy Saving per year as a result of work by University at Buffalo Green Committee

$58 Amount it costs city a year to dispose of waste of one person

About $150 Estimated cost to do same thing if landfill closes

What are other schools doing?

In November of 2004, the University of South Carolina opened the largest green residence of its kind in the world. The 172,000-square-foot facility features the latest technology to conserve water and energy, plus an outdoor amphitheater, a learning center fueled partly by a hydrogen fuel cell, a turf roof, and a café that sells environmentally conscious food. According to USC's housing director, green residences are cheaper to maintain and surprisingly, cost no more to build than a traditional residence. This, along with the wait list to get into the dorm, begs the question: Why would you build any other way?

Carnegie Mellon's Green Practices committee touches on all aspects of campus life, from an extremely successful recycling program, to bio-fueled campus vehicles, to LEED certified buildings. One of the most ambitious projects has been the switch to wind power for 5% of the university's energy. To pay for the more expensive power, Carnegie Mellon is undertaking a "University Challenge", which aims to reduce energy use.

Students at Colorado University took on the cost of wind power by voting to increase their tuition by one dollar each.

At the smaller Connecticut College, students voted to pay an extra $25 a year to fund a switch to 22% renewable energy. The college also funds an "Earth House" for students interested in sustainable living, and installed solar panels on the roof of one of the dorms. Students even run a revolving program that turns old, inefficient light bulbs into artwork, which in turn is auctioned off to fund the light bulb exchange.

True to form, Harvard has transformed the Green Campus Initiative into a profit-making venture. It offers services to departments, colleges, and faculty who wish to operate more efficiently. The $1.1 million business trains students in management practices, while saving the university over $5 million a year through renovations and awareness campaigns. The GCI uses some of its profits to purchase renewable energy certificates to offset 7% of Harvard's energy consumption, and has reversed the universities own previously upward trend of carbon emissions. GCI has expanded the selection of local and organic produce in the Dining Hall, and is testing kitchen oil as a possible fuel for a university recycling truck.

Lewis and Clark College became the first college to comply with the Kyoto Protocol on greenhouse gas emissions, and to offer students the option of purchasing green power for their dorm rooms. The total cost of renovating the university to achieve this was only ten dollars per student.

How Universities Save the World

Planting green Roofs

Toyota now makes Turf Tiles; rubber and grass tiles that are ready to use, provide excellent insulation, and only need to be cut once a year. Rooftop gardens can also be installed, which have the added benefit of providing a habitat for birds and insects, and absorbing air pollutants, while adding to the aesthetic of a building.

Buying renewable energy credits:

For some smaller colleges and universities, especially those in remote places, renewable energy is not available or cost efficient. Instead, credits can be bought to offset fossil fuel consumption, in effect paying for someone else to use renewable energy.

Using wind power:

Wind farms are touted as an almost perfect renewable, clean energy source. Giant turbines capture wind and turn it into electricity, emitting no emissions, and using no carbon fuels. The only setback is the higher price of energy compared to fossil fuels.

Selling organic food:

Organic food has more vitimins and minerals and no unhealthy additives. Organic farming has been found to reduce runoff, use less energy, produce less waste, and promote species diversity. Most importantly, organic farms don't use chemical pesticides.

Using Bio-Fuel for its vehicles:

Bio-fuel can be derived from any biomass such as plants, manure, or even used cooking oil, making it a renewable fuel. It can be phased into many existing diesel engines without problem. Because carbon in bio-fuels has been so recently extracted from the atmosphere by the plant source, burning it does not result in a net increase in carbon emissions.

Making recycling more accessible:

Recycling existing products uses less energy, and reduces the amount of solid waste produced. For example, a ton of paper from recycled material conserves about 7,000 gallons of water, up to 31 trees, 60 lb of air pollutants and 4,000 KWh of electricity.

Using energy conscious technology and practices:

Small things, like using energy efficient light bulbs and water conserving toilets, or just turning off all computers at night, drastically cuts the amount of energy a campus uses, and saves a significant amount of money in the long run.

Recyclemania!

Competition was fierce in 2006 among Ivy League and state schools alike to see who could win the coveted Grand Champion award for the most recyclables and least waste. The result was a total 18.6 million tons of collected recyclables, achieved by student initiatives across the nation. The doubling number of participating colleges each year ensures a rising awareness among students about effective recycling methods. Visit www.Recyclemaniacs.com for more information.