



catalyst

for sustainability and environmental leadership

summer 2011

WARREN WILSON COLLEGE

Building Healthy & Sustainable Communities Conference

Phillip Gibson, Environmental Leadership Center

Join regional professionals to learn best practices and forge collaborations in the name of healthier and more sustainable communities in western North Carolina. Professionals from the educational, medical, real estate development and green business sectors will gather on June 2 and 3 for the "Building Healthy & Sustainable Communities Conference" at the Mountain Area Health Education Center and Warren Wilson College.

Sustainable communities require cross-sector collaborations in such vital areas as health, education, and the built environment. The degree to which we interact across professional networks to understand how we influence the economic, environmental and human experience of our region defines the quality of our communities. In the name of establishing a bridge across these networks, Warren Wilson and Mountain Area Health Education Center (MAHEC) are merging the Environmental Leadership Center's annual Mountain Green Conference with MAHEC's health education symposium. With leadership from



Dr. Olson Huff, and Asheville attorney Bob Deutsch, along with a steering committee of regional professionals, the conference promises strong cross-sector engagement.

Dr. Laura Gerald will launch the conference on the evening of June 2 at MAHEC. Dr. Gerald is the Executive Director of the North Carolina Health and Wellness Trust Fund (HWTF). HWTF makes North Carolina stronger, both physically and economically, by funding programs that promote preventive health.

Dennis Creech also serves as a keynote and he will speak on June 3 at Warren Wilson College. Creech is a co-founder and executive director of Southface, a nonprofit organization based in Atlanta, GA that addresses the need in the southeast and beyond for research and education in energy policy, sustainable technologies and applied building science.

The conference schedule features sessions led by regional and national speakers addressing health, green building practices, and sustainable community planning. There will be local food, vendor displays, and networking opportunities. For more information, contact Phillip Gibson at 828.712.0972 or visit www.mountaingreenwnc.org.

Education for the 21st Century

Octavia Sola, WWC '11, environmental studies major, conservation biology concentration

USA Today recently interviewed Octavia Sola about her Warren Wilson experience and an excerpt follows.

I believe that a college's commitment to sustainability and environmental stewardship is important because as our society continues to grow and prosper, we have a moral imperative to protect and conserve our environment and natural resources. It's an important reason I chose Warren Wilson. I am about to graduate as an environmental studies major with a concentration in conservation biology. I chose this path because I am interested in the interconnections between humans and the environment and am specifically concerned about the current rapid loss of biodiversity. I hope to continue to do research and to communicate my findings through education and outreach to communities.

Sustainability is ingrained in the culture at Warren Wilson and many efforts are intertwined. From the College's mission statement, and its strategic plan, to the leadership team's adoption of a sustainable decision making model to encourage all of the decisions on campus, from the lowest (what snacks to include in the vending machines) to the highest (those made on the President's Advisory Council) to take the social, economic, and environmental impacts into consideration before making a decision.

The best of Warren Wilson's green and sustainable education happens through the Triad of work, service, and academics which provides a hands on experience for all students. Student work crews support our commitment to sustainability, some of which include Farm, Garden, and Forestry who work to sustainably manage our 1,100 acre campus. I am on the Environmental Leadership Center's work crew, where I teach EcoTeam, an environmental, science-based curriculum for third graders in elementary schools across Buncombe County.

Why is all of this so important to my education? Today's college students are intellectually coming of age at a unique time in which our society is gaining a deeper understanding of the far-reaching and overlapping consequences of industrialization and globalization, which include climate change, rapid declines in biodiversity worldwide, and pollution of the air, water, and soil. As we pursue degrees in higher education, it is imperative that we have a broad understanding of these pressing issues and that we work within our own communities to lead the change we seek. Experience with organizing a sustainable community while in college is a tool that we students will need after we graduate.

I know I will use this tool. My immediate career goal is to publish my undergraduate capstone research entitled "Human Activity and Shorebird Behavior and Diversity on Onslow Beach, Camp Lejeune" and to attend graduate school for marine biology. I ultimately hope to be involved in sea turtle conservation work in the United States or Central and South America.



EcoTeam Crew member, Octavia Sola, WWC '11, teaches third-graders at a local elementary school about the awe and wonder of pollination. Here she guides them through the hands-on, minds-on dissection of a lily to learn about flower anatomy and how flowers attract pollinators. For over a decade, EcoTeam has brought its nationally acclaimed, French Broad River Basin-based environmental education curriculum to 75% of Buncombe County's third-grade classrooms, reaching over 1,300 children annually. The curriculum includes 10 one-hour experiential lessons that are correlated to North Carolina and national standards. Lessons include River Basins, Soil, Water Cycle, Predator/Prey, Pollination, Symbiosis, Energy, Climate and Environmental Citizenship. Visit www.warren-wilson.edu/~elc/ecoteam/ to learn more about the program.

2011 Sustainability Speakers

Ellen Querin, Environmental Leadership Center

For the coming academic year, the Environmental Leadership Center's Sustainability Speaker Series will continue to bring national leaders to the campus and the region to inspire and challenge us to act on behalf of a more sustainable world. Each speaker will provide an evening talk, free and open to the public, and meet with faculty, students and staff on campus.

Neil Chambers will kick off the fall Series. He has been at the forefront of cutting-edge green architecture and sustainable design for years. His latest book, *Urban Green*, brings the power of the sustainability conversation and the design movement together. He will be speaking on September 14 at 7:00 pm in Canon Lounge. For more information about Chambers, visit <http://www.chambers-designinc.com/>.

David Pimentel, Professor Emeritus of Ecology and Evolutionary Biology at Cornell University, joins us on October 5 at 7:00 pm. Dr. Pimentel's research spans the field of sustainable agriculture to include ecological and economic aspects of pest control, biotechnology, land, water, and energy conservation, natural resource management, environmental policy, and basic population ecology. He has published more than 20 books and his most recent focus is on sustainable energy choices. Read an interview with Dr. Pimentel here: <http://www.grist.org/article/philpott2>.

Peter H. Raven, a leading botanist and advocate of biodiversity conservation, is President Emeritus of the Missouri Botanical Garden and George Engelmann Professor of Botany Emeritus at Washington University in St. Louis. In the mid-60's, Dr. Raven recorded that rapid growth of the human population, consumption, and the spread of polluting technologies were threatening biological diversity to a degree that had not been previously known. He became an outspoken advocate for conservation throughout the world and an articulate spokesperson for the cultural and economic as well as the environmental implications of shrinking biodiversity. Dr. Raven will be speaking on November 3 at the College Chapel at 7:00 pm.

For more information about the Sustainability Speaker Series contact Ellen Querin at querin@warren-wilson.edu or visit www.warren-wilson.edu/~ELC/New_ELC_Website/_Audio_Recordings.php.

SPECIAL STUDENT EDITION!

Internships Forge Connections

Jess Sutt, WWC '11, environmental studies major, conservation biology and environmental education concentrations

The Environmental Leadership Center provides up to 25 paid summer internships each year, for qualified Warren Wilson students, with leading environmental and sustainability organizations. These experiences often serve to translate students academic work into meaningful career goals.



This past summer I served as an education and restoration intern for the North Carolina Coastal Federation (NCCF). Not only did my experience with this organization provide me extensive knowledge of the coast and a sturdier pair of sea legs, it gave me an invaluable understanding of sustainability.

It was easy to get lost in each moment of the day, such as pausing to feel a snail crawl across your palm. Yet, being consumed by these connections with nature are what make the ultimate impact. It is in these moments, people of all ages learn to love the coast. With that understanding and passion comes inspiration to conserve the coast. With conservation not only resources are protected, but also coastal lifestyles that rely on these resources.

Coastal society depends on the coastal economy, often one of fishing and tourism. The health of such an economy depends on a healthy coastal environment. The North Carolina coast is a perfect

place to realize the vital balance of social justice, economy, and environment.

Being immersed in the coastal community allowed me to recognize the mutual reliance between citizens and their environment. I lived the connection of education, restoration, environment, human lifestyle, and sustainability. I'm now able to realize that understanding an important and complex concept like that of sustainability can start with something as small as a shrimp jumping out of a child's hand. Visit www.warren-wilson.edu/~elc/new_ELC_website_/internship.php

2011 Sustainability Interns

Audubon Seabird Restoration, **Halley Walsh**

Black Mountain Community Garden, **Aléna Leonatti**

Black Mountain Community Garden, **Remington White**

City of Asheville, Office of Sustainability, **Kesari Fleury**

Cooper Riis Healing Farm Community, **Stephanie Ng Ping Cheung**

Cooper Riis Healing Farm Community, **Laura Miess**

Discover Life in America, **Eric Zimdars**

Dogwood Alliance, **Morgan Steele**

Environmental Quality Institute, **Stacy Edmond**

Great Smoky Mtns. National Park

Appalachian Highland Science Learning Ctr., **Keaton Rodland**

Montreat Conference Center, **Katherine George**

National Climatic Data Center, **Araya Larson**

The Nature Conservancy, Long Island, **Marie Orton**

North Carolina Coastal Federation, **Alden Picard**

Smithsonian Environmental Research Ctr., **Diana Sisson**

Tom Yawkey Wildlife Center, **Mandy Wegmann**

Western North Carolina Alliance, **Chelsea Brandau**

The French Broad Riverkeeper, **Gus Keller**

The Wilderness Society, **Nick Biemiller**

One Mission and One Land

Emmet Fisher, WWC '11 environmental studies major, policy and education concentrations

Cella Langer, WWC '11, environmental studies major, environmental education concentration

When Cella and I arrived at Warren Wilson in the fall of 2007, we shared an interest in land use planning and its effect on communities. One of our professional goals early in our college careers was to serve on the College's Long Range Land Use Committee. During our second semester, Cella requested funding from the WWC Work Program Office so that we could attend the Congress for the New Urbanism. Dean of Work Ian Robertson agreed to help fund our trip on the condition that when we returned, we would serve on the Long Range Land Use Committee.

During the three years that we have served on Long Range Land Use, the Committee drafted "One Mission, One Land" – a revision of the College's 1996 Long Range Land Use Plan and the first land use plan the College has put forth that includes the central campus. The forty-six-page document has not yet been formally approved but it is, for all intensive purposes, the road map for strategic, principled College growth. "One Mission, One Land" includes principles of planning, pattern languages, descriptions of planning-related campus issues, and action steps to meet those challenges.



The guiding principles of land use set forth in the plan build upon the College's legacy of stewardship and its core values: sustainability, community involvement, honoring the character of the land, managing the land with an eye to its ecosystems, educational value, community aesthetic value, and resource yields, and finally, enhancing the value of the land.

Planning issues range from new buildings or infrastructure to optimizing community benefits from the land. For instance, "One Mission, One Land" acknowledges that the College currently does not adequately meet the needs of pedestrians in the core campus, and calls for planning efforts to remedy the situation. "One Mission, One Land" then provides pattern languages, such as "Ownership of Pathway," "Walking Campus," "Pedestrian Core," and "Community Transportation" to guide the planning efforts underway in this area, and to delegate areas of responsibility to appropriate governance bodies.

Through use of "One Mission, One Land," Warren Wilson can begin to foster concerted, long-term land use planning that truly upholds the mission of the College. You may read the document at <http://issuu.com/jbowers/docs/1mission1land/1>.

Paper Reduction Project Wins Sustainability Recognition Award

Amy Wagner, WWC '11, environmental studies and conservation biology major

Warren Wilson's Sustainability Working Group has selected the Paper Reduction project as the College's inaugural Sustainability Recognition Award winner. The Award distinguishes campus projects that engage the Triad of academics, work and service in innovation and leadership activities, in and out of the classroom, to address complex issues through the lens of sustainability.

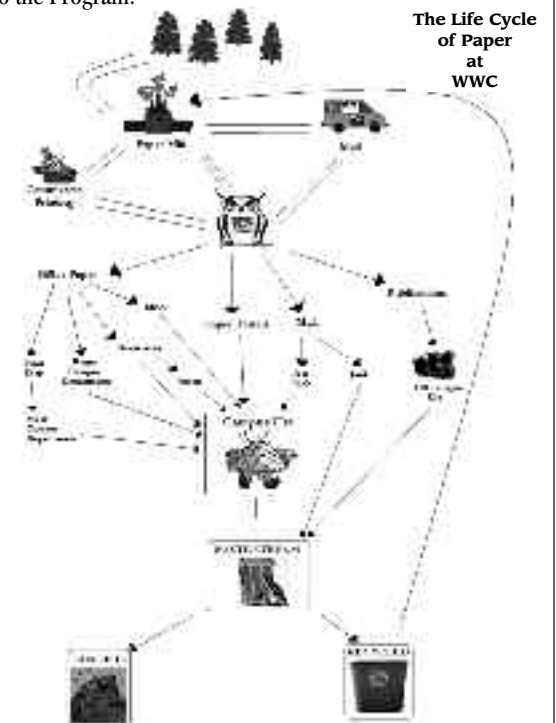
The Paper Reduction Working Group that convened last fall includes students, staff, and faculty who are committed to a sustainable future. The group was initially formed by Chris Nugent, the College's Library Director, who said, "It grew out of desperation. The Library sees the majority of printing on campus and our tight budget has been used to purchase paper and ink rather than new books and DVDs." Environmental Studies Assistant Natasha Shipman now co-leads the Group.

Their goals are to reduce paper used on campus for printing, copying, and publications, increase the use of 100% post consumer recycled paper, decrease the amount of junk mail and other forms of paper entering the waste stream, reduce the environmental impacts of paper production and disposal – especially to water, air and climate, and educate about the broader environmental, social and economic impacts of paper. Group members are conducting a life cycle analysis of WWC paper use, mapping its flow through campus, identifying the costs associated with current practices and potential improvements, base-lining paper use at computer labs and surveying community views about the importance of paper as a higher education tool.

Hilary Sullivan, a junior on the Environmental Leadership Center's Campus Greening Crew and a member of the Paper Reduction Committee, calculated that last year, campus used almost 2 million sheets of paper. "All of that paper, stacked up, would be taller than the Washington Monument," said Sullivan. "Reducing paper usage is another small way in which our campus can become more sustainable. It isn't the largest or most pressing issue on campus - but solving the small issues can help bring more light to the bigger issues."

The Group is still in the process of deciding how it will achieve an overall paper reduction, but a print quota is one option being considered. For more information about the Paper Reduction Project contact nugent@warren-wilson.edu or nshipman@warren-wilson.edu. Visit the website, "Life of Paper," for a map of WWC's usage: www.warren-wilson.edu/~elc/New_ELC_Website_/The_Life_Cycle_of_Paper/main.php.

To learn more about the Sustainability Recognition Program, visit www.warren-wilson.edu/~elc/sustainability/index.php and link to the Program.



WWC in USA Today

The EcoDorm is featured on page 70 of *USA Today's* inaugural edition of the magazine *Your Life/Guide to Green Living* in newsstands now. Visit <http://www.usatoday.com/> for more information.

Leaders Urge Involvement

Araya Larson, WWC '14

This year the College's Environmental Leadership Center (ELC) hosted five remarkable activists for our Sustainability Speakers Series: Anita Brown-Graham, Bill McKibben, Lester Brown, Mallory McDuff, and Jeff Biggers. Each lecture was uniquely inspiring and action-provoking.

Anita Brown-Graham, Executive Director of North Carolina's Institute for Emerging Issues (IEI), opened the Series with a sweep of North Carolina's challenges and dreams. Provoking us with data and then connecting the economic, cultural, and environmental dots to emphasize their interdependence, Brown-Graham called for focus, effective problem solving, and faith in the power of collaboration – a model IEI is leading in the state. "Sustainable communities are everyone's business," she urged, "from citizens to policymakers." She called on us all to get involved.

This message – "get involved" – was echoed by each of the Speakers. This is the point, really, of our Sustainability Speaker Series: Get involved! I was honored to talk one-on-one with a few of these motivating leaders and record their voices and passionate views for the Environmental Leadership Center's *Swannanoa Journal*, a weekly broadcast aired on WNCW's public radio station 88.7 which I help develop as a member of the ELC student work crew.

Bill McKibben

Author and organizer Bill McKibben came to Warren Wilson this past October and was heartened by the College and the region's earnest interest in climate action. He called for persistence and bravery in the fight for the globe. He warned "It is necessary, I'm afraid, to build a sort of movement to strike back." His plan is simple: make the effort 80% local and 20% global, with decentralized, small communities building a global network, encouraging of diversity, under a common goal. McKibben met later with the ELC's student crew and urged that though sometimes we all feel powerless in the fight, our surrounding comrades must spur us onward. "This is the first global problem we ever have faced," he explained. When asked why he chose 350 as a symbol and slogan for his massive global movement he said, "Numbers translate. 350 is the safe limit for parts per million of carbon dioxide in the atmosphere. This means even those who have already changed their light bulbs and switched their cars for bikes have more to do."

Lester Brown

Lester Brown, founder of the Earth Policy Institute, and called "the guru of the environmental movement," spoke to an inspired crowd at the College Chapel. He described his most recent book, *Plan B 4.0: Mobilizing to Save Civilization*, which details what must be

done to save the world from the dangers of climate change, a costly goal. When I asked Brown how he rationalizes the incredible cost he lays out in "Plan B" his answer was ominous: "By thinking about the cost of not doing it. Of what's at stake. As an environmentalist, I, and others, have been talking for decades about saving the planet, but here's the truth: the planet's probably going to be around for some time. The question now is about saving civilization itself. And I don't think civilization can withstand continual rapid climate change."

Mallory McDuff

Mallory McDuff, an author and Environmental Studies Professor at Warren Wilson, spoke in January to the region's diverse faith communities about the tricky, growing, and essential interface between environmental activism and religion. McDuff's work researching faith-based groups and their environmental activism is ongoing (see page 8). In an op ed she wrote for the Huffington Post, McDuff said, "In the religious-environmental movement, the moral imperative to care for God's earth has brought together faith traditions that don't typically worship in the same space or eat at the same table. Across the country, the oil spill propelled thousands of interfaith services from Fairhope, AL to Newark, NJ. In Illinois, an interfaith organization called Faith in Place has created strong connections between Muslims in Chicago and Christian farmers who provide organic meat during Ramadan."

Jeff Biggers

Jeff Biggers came from a mining family in Southern Illinois and has written many books and articles about the coal industry and Appalachia. When he spoke at the College, he was dynamic and poetic, engaging the group with his thick accent and story telling, interweaving historical information with his intense frustration with the coal industry in Appalachia. He narrated coal miners' stories and captivated us all. "Three coal miners died today," Biggers told. "Three coal miners died today from black lung disease, in the year 2011. A thousand coal miners will die this year from black lung disease. And no one ever talks about it. I didn't know what to think and this old coal miner came up to me and he laughed and he laughed. 'Man,' he cackled out a laugh and he said, 'You know you should've talked to your Granddaddy because he'd always say this: The abuse of the miner goes hand in hand with the abuse of our land.' Who do you think is gonna be next?"

For more on the *Swannanoa Journal* and the 2011-2012 Sustainability Speakers Series (see page 1) visit http://www.warren-wilson.edu/~ELC/New_ELC_Website/_Main.php.

Warren Wilson Sustainability Statement

We acknowledge that a complex web of economic, social, cultural, spiritual and environmental factors determines the well-being of our community.

We recognize our power as individuals, and in community, to influence these complex, interdependent relationships.

We strive to make responsible decisions that take into account the multiple dimensions of sustainability in order to ensure quality of life now and for the generations to come.

www.warren-wilson.edu/~elc/sustainability/index.php

Documenting Footprints

Sarah Rebecca Hyde,
WWC '11, creative writing major

At last year's graduation I knew most of the graduates who walked across the stage and then went on to Kentucky, Vermont, or California. Some were close friends others were people I smiled at on the bridge. Regardless, they were a part of the WWC community that the land helped to shape, with calluses on palms, mud on boots. I realized that stories would be lost with no one to tell them, with only the soil keeping our sweat, our conversations.



With my creative writing internship hovering above my head, I decided to pair the two things I had been constantly thinking about: this school, this place that I have called home for the past four years and the people who scrawl their stories into it.

In the spring of 2010, with undergraduate writing professor Catherine Reid advising me, I put together my first anthology titled *This, I Will Miss*. The anthology featured many of our talented creative writing students and others who write, but are not majoring in the art. Short essays, poems, and prose were paired with black and white photographs from the Warren Wilson archives featuring former students working the landscape.

In the end it was not only a delight to see the finished project but also gratifying to somehow bond these stories about land and school. To document these footprints in river trail mud, hip high oat grass, and among the clippings from piglets' teeth. Stories that would have otherwise been lost in this Carolina clay that roots us all.

If the next generation of citizen leaders is to be engaged and committed to leading for the common good, then the institutions which nurture them must be engaged in the work of the society and the community, modeling effective leadership and problem-solving skills, demonstrating how to accomplish change for the common good. This requires institutions of higher education to set their own house in order, if they expect to produce students who will improve society.

from the
W. K. Kellogg Foundation Report,
"Leadership Reconsidered:
Engaging Higher Education
in Social Change,"
A. W. Astin and H. S. Astin, 2000



Art Meets Environment

Jay Casale, WWC '11, art major,
sculpture concentration, minor in gender studies

Creating artwork that is environmentally ethical is vital to my process as an artist living in the early 21st century. I create work that is deeply ecological, using recycled or low carbon footprint materials. I look to create art forms that are carbon neutral and eventually, I hope to create works that involve environmental remediation beyond recycling.

My work is environmentally based because the destruction of the ecosystem is the most pressing concern for our species and the health of the non-human world. I cannot separate myself from that destruction, so for my senior art exhibition, I have created an environmental installation that depicts an ecological disaster – the Gulf Coast oil explosion with sea life flowing out from a wellhead at the bottom of the ocean. The steel wire life forms are covered in petroleum, in the form of melted, recycled and or reclaimed Low and High Density Polyethylene sheets. The filmy layers of discarded trash bags, other disposable plastics, and the found oil drum from which they spew connect human material choices and habits to the ecological destruction they empower.

Somewhere between 170 and 185 million gallons of crude oil poured into the Gulf. I felt and saw a connection to the ecological devastation of fossil fuel economies and the feathered serpent of ancient Mesoamerican cultures. The feathered serpent is the creator and destroyer of civilizations. The use of the fossilized remains of organic matter for energy simultaneously ameliorates the condition of our daily lived culture, and destroys the possibility for our civilization and much of the non human life to continue on this planet. This installation is catharsis for my complicity in that destruction.



Climate Action

Commitment Drives Action

This March, the College conducted its first annual review of progress on Climate Action goals that target an 80% reduction in greenhouse gas emissions by 2020. Since September 2009, Warren Wilson has taken measured steps to engage its liberal arts triad of academics, work and service in this seminal challenge.

Energy conservation as a community principle is not new to Warren Wilson. It was one of the themes of the College's newly formed environmental studies major in the mid-'70's and the College's Long Range Facilities Plan in the early 90's. The Climate Action Plan, however, represents the first time the College has set measured, strategic goals to reduce its energy usage, its reliance upon fossil fuels, and its carbon footprint.

President Sandy Pfeiffer pledged that Warren Wilson would aim for carbon neutrality when he became a founding signatory of the American College and University Presidents Climate Commitment (ACUPCC) in 2007. The Climate Action Plan (CAP) was filed with the ACUPCC in September 2009 and the goal clock began to tick. Strategies were launched campus-wide with a particular emphasis upon curbing energy use, conducting climate-related research, and prioritizing a transition to renewable energy sources. In October 2010, Warren Wilson was distinguished with the inaugural national award from Second Nature for a private baccalaureate college excelling in climate action and sustainability education.

With a five-year goal to reduce emissions by 25% from electric use, natural gas, and transportation, results after year one are

encouraging and challenging. Though we celebrate the 16.5% reduction in overall greenhouse gas emissions, we note the reduction has been achieved mostly because of a reduced transportation footprint.

The ACUPCC commitment calls for research, innovation, and significant behavioral change in order to achieve reductions and build resilient and sustainable communities. We are challenged to meet this pledge and recognize that through our research, our struggles, and our successes, we will define the practices and the behaviors required for resilience in the 21st century.

Environmental Justice With Skill

Fern Greenleaf, WWC '10, creative writing and environmental studies major
Rachel Luna Scarano, WWC '11, philosophy major
Anna Brinton Grant, WWC'14

The Environmental Justice Crew launched in fall 2010. As founding members, we recognized that the WWC community needed a crew solely devoted to understanding and responding effectively to issues of environmental justice and the Work Program was receptive. Peace studies professor Steve Norris agreed to be the supervisor, and the crew was born.

In our short time as a crew, we have undertaken many successful events. This past September, we led 30 students on a trip to Washington DC for "Appalachia Rising," a conference and peaceful day of action against mountaintop removal coal mining. We hosted a talk on campus by the French Broad Riverkeeper and attended two EPA hearings where we testified about our personal views on coal ash regulation. We rounded out our coal-focused semester showcasing Beehive Design Collective's new poster "True Cost of Coal."

This spring we have hosted a variety of skills trainings vital to the environmental activist's repertoire including the "Mountain Justice Spring Break," a week-long trip focused on learning to effectively oppose Mountaintop Removal Coal Mining. Our long-term goal is to keep WWC students engaged in larger environmental issues through knowledge and action and to empower them with the skills they need to continue a life of environmental activism post-Wilson.

WWC Receives National Award for Climate Action

Warren Wilson was distinguished with the inaugural national award for a private baccalaureate college from Second Nature, for Institutional Excellence in Climate Leadership, at the 2010 summit of the American College & University Presidents' Climate Commitment (ACUPCC). This award was shared with Dickinson College, for both institutions outstanding climate action and sustainability education.

How to Write a SEMP

Abi Locatis, WWC '11, environmental studies major, policy concentration

Early in 2011, in my work for the Energy Services Crew, WWC's Facilities Management and Technical Services Director Paul Braese charged me with writing a Strategic Energy Management Plan (SEMP) for campus. He jokingly said it was just to keep me busy but I quickly realized that such a detailed building improvement plan is essential to achieving Warren Wilson's Climate Action Plan (CAP) goals, developed to support fulfillment of our American College and University Presidents Climate Commitment (ACUPCC). The CAP lists action steps for the built environment, but the SEMP provides a detailed strategy for energy use reduction by setting demanding performance goals, specifying courses of action to be taken, and providing ways to measure and verify performance.

To prepare to write the SEMP, I researched similar plans from other organizations. The City of Asheville's is quite impressive. We are formal partners with the City, to support one another to achieve our respective climate action goals, and we learn from one another's initiatives. WWC's plan is simpler but has strong goals: to reduce campus energy and water use in order to meet CAP goals; to enable the College to switch to renewable sources of energy; and to reduce and possibly eliminate reliance on city water.

Reduced consumption and sustainability are key steps to creating a resilient community. It would be nearly impossible and very expensive for the College to use renewable energy sources to meet its current energy demand. Efficiency must come first. Therefore it is necessary to make all of the College's buildings as efficient as possible, thus significantly reducing the energy demanded. In addition to creating resilience, having a SEMP augments the College's long-term ability to remain viable in a competitive environment by demonstrating more fully its commitment to leadership in sustainability and environmental innovation as part of the culture, mission and strategy of the College.

After almost a year and a half of research, writing and revision, the SEMP is ready for a seal of approval from College leadership. That is, however, the easy part. The real challenge is in the implementation - from acquiring necessary funds for the retrofits, to developing an infrastructure that organizes and communicates around SEMP goals. I'm graduating in May and won't be around to see it unfold but I hope the Warren Wilson community meets the very real challenges of sustainability and resilience.

Community Support for INSULATE!

Elizabeth Creech, WWC '12, environmental studies and biology major
Ian Higgins, '12, environmental studies and biology major

The Asheville Home Builders Association's Executive Officer Caroline Sutton and 1st Vice President James Bound presented INSULATE! with a one thousand dollar check at their annual meeting, held this past January. Warren Wilson student work crew leaders Elizabeth Creech and Ian Higgins accepted the contribution on behalf of INSULATE!, a program of the Environmental Leadership Center. "I am especially impressed with INSULATE!," said Sutton, "and the job Warren Wilson's student volunteers are doing at weatherizing homes, especially on Saturday mornings. In making this contribution we are furthering their ability to get in and give back."

INSULATE! connects Warren Wilson student and faculty teams with community partners to weatherize low income homes in Buncombe County. Their work not only lowers bills for people who spend an average of 59.3% of their annual income on energy, it also lowers energy consumption in the community as a whole. The Asheville Home Builders Association (AHBA), along with Community Action Opportunities, has been vital to the success of INSULATE! With their help, since 2008 INSULATE! has weatherized thirty-nine houses including 15 this past year completed by Warren Wilson faculty and their classes on weekends. This contribution from the AHBA is essential to the work of the program.

Students and faculty insulate the homes of low-income families in Buncombe County on weekends. We learn a properly insulated house conserves energy, which is beneficial for the environment, and saves money for the family that lives there. In effect, we are addressing both environmental and social justice issues through this program, one home at a time.

WWC student participant



Campus Greening Crew Supports Plan

Silvia LaPorta, WWC '13, integrative studies major



The Campus Greening Crew has had a successful and busy year. In the fall, after launching the Sustainability Film Series (see page 6), we turned to the Climate Action Plan. We researched the amount of coal the WWC campus consumes and were shocked to find we use 1 ton every 4 hours. To make a point, we brought 1 ton of coal to campus in a dump truck and parked it outside the dining hall during lunch hour next to a display of common appliances, hooked to voltage meters. Later in the fall, we organized a rally in support of

campus climate action featuring an enormous pile of recycled paper representing just a day's campus usage, staged guerilla theater, and used informative displays to raise awareness about the links between resource use and greenhouse gas emissions.

As the beautiful autumn weather here in the Blue Ridge Mountains changed into winter, we collaborated with several other departments to reduce our campus consumption of paper products and developed several case studies of our green buildings for the National Wildlife Federation's Campus Ecology Program.

As winter changed into spring, the Crew assisted in a "Sustainability" audit of the Service Learning Office and will use this information to help "green" their practices. We also traced the apparel sold in the Warren Wilson bookstore back to the factory source. And, we maintained several ongoing projects such as the College's regional *Green Calendar*, (www.warren-wilson.edu/~ELC/New_ELC_Website/Green_Calendar.php); the Dorm Energy Challenge; the College's quarterly energy reports, which track gasoline, natural gas, and electric usage campus-wide; and the annual greenhouse gas emissions inventory. As the academic year comes to a close, and we wrap up final projects, we know our time has been well-spent.

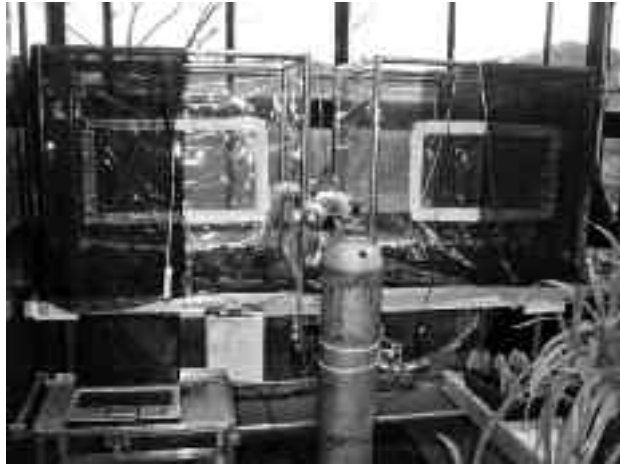
Plan Underway

Student Research Informs Climate Goals

Warren Wilson students conduct research each year that contributes to the growing body of data about the impacts of climate change upon ecosystem services and helps to inform our practices. For their Natural Science Seminar, the capstone project for all chemistry, biology, and most environmental studies majors at the College, students produce original research and many use the campus as a living laboratory for their inquiry. According to Sustainable Forestry Professor Dave Ellum, "The work of these bright students and those to follow is critical in understanding how the College's working landscape integrates into the long-term climate goals of the College and in our efforts to demonstrate sustainable practices to the larger community." Here are summaries of just a few of the 2011 research projects.

Linden Blaisus

WWC '11, environmental studies major, sustainable forestry and environmental chemistry concentrations



"My research focuses on the growth response of *Rosa multiflora* (multiflora rose) to increased CO₂ (carbon dioxide) in the atmosphere. I also wanted to find out whether increased CO₂ affects *Rosa multiflora*'s shade tolerance, because shade tolerance is the main factor preventing *Rosa multiflora* from invading intact ecosystems. If *Rosa multiflora* gained the ability to grow in heavily shaded environments, it would become a much greater invasive threat to future forest management. To conduct my study I constructed a small microcosm in the Warren Wilson science greenhouse and pumped in CO₂. Inside the microcosm I grew *Rosa multiflora* cuttings for a semester, then harvested them, and carefully weighed each rose's stem, leaves, and roots to see how much each rose grew. The results of my study indicate that, in the short term, CO₂ does not affect *Rosa multiflora*'s shade tolerance or growth."

Sean Pulsfort

WWC '11, chemistry major

"A lot of people hear that beef production contributes greatly to climate change, but the discussion often leaves out the impacts of different production systems. I started my senior research project wanting to compare the total system greenhouse gas emissions of a management-intensive grazing (MIG) livestock system and a confinement system. When my ambitious idea was boiled down to a manageable project, I ended up playing with poop. I spent the past year developing an analytic method to quantify greenhouse gas emissions and using that method to examine emissions from cow manure. Specifically, I examined emissions from dung pats, inorganic fertilizer, and the combination of the two in a simulated environment I created in a greenhouse. My data compared well with current literature, but this project is really just breaking ground for research at Warren Wilson in the future. Hopefully students will be interested in climate change and greenhouse gas emissions, and do meaningful research in the years to come. Building this project from scratch taught me a lot; it was a very gratifying process. Hopefully the experience will help me succeed in graduate school, and make me a stronger candidate."



Jesse Rickard

WWC '11, environmental studies major, sustainable forestry concentration

"During the summer of 2010, I conducted a study to determine the effects of forest management activities on soil carbon processes. To do this, I measured changes in soil respiration in differently treated areas of the College's Christmas Tree Hill. Soil respiration is a measure of the activity of microbes in the soil, primarily decomposers. I found that some silviculture treatments had a dramatic effect on the activity of these soil microbes while others had a negligible effect. The magnitude of the change followed closely the amount of trees removed. Greater removal of the overstory caused a greater increase in sunlight and soil temperature which led to increased microbial activity and soil respiration. More soil respiration means faster decomposition in the forest floor, which means faster release of stored carbon from our forest. The implication for campus is that changes in management, such as forest canopy removal, can affect how our forest acts as a carbon sink. If we want to use the College forest to help mitigate our carbon emissions, we need to know what management practices will accomplish our multiple goals of education, habitat, aesthetics, etc. while preserving and enhancing the carbon sequestration of our forest."



Sam Hyson

WWC '11, environmental studies major, sustainable forestry concentration

"Phenology, the timing of biological events, is an important topic in climate change research because many organisms' phenology is climate-dependent. In the temperate Northern hemisphere, advances in plants' spring phenology have averaged 1-3 days per decade over the past several decades. Changes in phenology can alter trophic relationships, competitive dynamics, and ecosystem productivity. My study monitors six tree species on campus for dates of leaf emergence, comparing understory trees on a cool north-facing slope of the College forest with trees in the landscaping or forest edges of core campus, which are exposed to warmer air temperatures due to direct sunlight and the proximity of roads and buildings. Any phenological differences observed between the two microclimates might help predict the future effects of a warmer climate on Southern Appalachian forests. I will contribute my data to a larger data set compiled by the USA National Phenology Network, an organization dedicated to investigating the influence of climate on phenology (www.usanpn.org). In addition, I hope to establish a method for yearly monitoring of tree phenology at Warren Wilson to track the effects of climate change on campus over the next several decades."

John Paul Reitz

WWC '11, environmental studies major, sustainable agriculture concentration

"Weeds are the number one management challenge at most organic farms, including here at the WWC Garden. To address our weeds problem, we need to better understand where they are coming from: our "weed seedbank." This "seedbank" is the reserve of weed seeds in the uppermost layer of soil where we have cultivated and tilled for growing vegetables. Unlike the banks you're accustomed to, in this case the goal is to minimize deposits and maximize withdrawals. My research objective is to determine if our weeds problem is related to how we till. Most of the WWC Garden acreage is tilled with a tractor, and a bit of it is tilled with hand tools such as shovels, forks, and rakes. Emilene Whidbee and I collected soil samples from each tractor-tilled field and hand-tilled bed, then we took these samples to the greenhouse and put them in individual containers to germinate. After counting and identifying all the weed seedlings that sprouted up, we performed a statistical analysis to find out if there is any correlation between the characteristics of the seedbank (i.e. species, density, depth) and how the soil was tilled. I'll be the first to admit: I was hoping we would confirm that hand-tilling is superior! Although we found a statistically significant correlation between tractor-tilled fields and more abundant weed seedling emergence, we cannot claim to know causation. Because there are so many variables involved in this case, we can't know if tractor-tilling is the true culprit. Nevertheless, these findings do suggest that there may be something about hand-tilling that helps reduce the proliferation of weed seeds."



Adopt Sustainable Practices!

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the Sustainable Practices Guide

www.warren-wilson.edu/~elc/sustainability/Sustainable Practices Guide 1 20 11.pdf

CATALYST

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Send comments to John Brock, Interim Executive Director of the Environmental Leadership Center,
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Alum's Life of Purpose

Adrienne Simonson, WWC '97, environmental studies major, policy concentration

Attending WWC and working for the Environmental Leadership Center were two of the best decisions I have ever made, providing me with the substantive foundation upon which I have built my career and allowing me to play a role in the enactment of good environmental policies. At WWC, I was part of a community with common goals that included a desire to serve humanity, the rejection of crass materialism, and a relationship with the environment that bordered on sacred: not ideological or out of balance, but encompassing and compassionate, rational, scientific, and ultimately, aligned.

In 1996, when the Environmental Leadership Center (ELC) was just launching, I was a senior. Executive Director John Huie invited me to join his team. I helped write the grant that provided the initial funding for the ELC; served as its Acting Program Director; supervised the work crew; wrote and presented a slide show presentation on environmentalism at WWC to the Board of Trustees and various civic organizations in the state; and helped to host Carl Leopold's visit to campus that fall.

After graduation from WWC, I became Administrator of the Southern Appalachian Forest Coalition (SAFC) in Asheville, a non-profit conservation organization focused on roadless areas, watersheds, old growth forests, and unprotected cultural areas. In August 1999, I entered the Master of Public Administration program at the University of North Carolina, Chapel Hill; the following year, I entered Carolina Law School. In 2005, I was awarded a Presidential Management Fellowship (PMF) to participate in a program designed to attract top

graduate and professional students into government.

My PMF experience began as a budget analyst at the Department of the Interior, in the Office of Budget within the Office of the Secretary. Turns out, budget is where the action is: fast-paced, high-level, and analytical. I was responsible for the Minerals Management Service, which is now the Bureau of Ocean Energy Management Regulation and Enforcement, and the Office of Surface Mining and Reclamation.

As part of the PMF program, I needed a four-month rotation, and I was lucky enough to be selected for a detail to the House of Representatives, on the *Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Subcommittee*. I will never forget what it felt like to sit on the House floor when members were voting on the Ag bill at the end of July 2007. The mood in the room was akin to a sporting event; the tenor, noise and tension rose in waves. It was thrilling, scary, frustrating and exhilarating. I was hooked! My detail was extended indefinitely, and in early 2008, I was offered a full-time position in the House, working for the *Commerce, Justice, Science and Related Agencies Subcommittee*. I became responsible for the Commerce Department's budget, including agencies as disparate as the Bureau of the Census, the National Institute of Standards and Technology, the US Patent and Trademark Office, and the National Oceanic and Atmospheric Administration, as well as three independent, related agencies.



Appropriations Chairman, David R. Obey, (D-WI), 2007-2011, and Ranking Member, 1995-2007, and Adrienne Simonson, December 2010, in the Capitol.

I had an idea of what I wanted to do when I attended WWC, and in many ways, I am achieving those goals. But the actual positions are not what I imagined at all. And I am still working hard to "be the change [I] want to see in the world." WWC, in so many ways, spoke to my soul. It provided me with the path to my career. And it serves as a touchstone as I continue to forge my future.

Detroit: A City in Ruins?

David Grace, WWC '12, environmental studies major, sustainable agriculture concentration

Elizabeth Bonham, '11, environmental studies major, policy concentration

This semester, students organized a spring break service trip to Detroit that dealt with community development through urban agriculture projects. Twelve people attended: students Dave Grace, Elizabeth Bonham, Marcella Langer, Emmet Fisher, Michael Carter, Keaton Rodland, Kyle Brown, Melanie Kemp, Nora White, Freesia McKee, Jamila Stevenson, and staff partner Cathy Kramer.



Our group in Detroit's North Corktown neighborhood

Our group made the trek up north in a 14-passenger van, and lived in an *intimate* three-bedroom apartment of a soon-to-open hostel in North Corktown. In exchange for housing, we painted the interior of the hostel, which by early May will begin hosting visitors to Detroit in an effort to introduce responsible, informed tourism into the city's economy. Throughout the week, we engaged with different partner organizations who represented various angles of community development through urban farming and food systems.

Each day, we volunteered with a different gardening project. One of these included the Greening of Detroit, a garden resource and city greening program with whom we packed seeds for distribution to Detroit's 1,200 registered urban farms. Another community partner was EarthWorks, a garden project extended from a soup kitchen which functions as an education center and runs various outreach programs around food security. And we worked with Brother Nature Productions, a local CSA run on three acres of publicly owned land, sharing compost and infrastructural materials with similar organizations in the area.

In the evenings, the group participated in educational events with additional community partners. These included the Jeanie-Wylie Community, an activist household committed to hospitality and Spaulding Court, a development organization raising money for community projects and renovating low-income housing spaces. We visited the Detroit Institute of Art to see Diego Rivera's 1932 mural of the Motor City at the peak of industry. And, we were able to tour Catherine Ferguson Academy, a public school for pregnant and mothering women using a city farm in its education model, and the Heidelberg Project, a guerrilla public arts exhibit reclaiming vacant housing.

For us, the most significant outcome of this trip was the opportunity to learn and reflect upon the impacts of economic collapse, civic involvement, and our own role as students doing volunteer work in places that are not our own. Regardless of preconceived notions we had upon going to Detroit, what we saw there restructured our perspectives in a radical way. Although the city can seem desolate, there is a thriving activist movement there, emerging from truly grassroots initiatives, to restore the city's security and preserve its history. We were lucky to experience Detroit's hospitality as we learned from its people how to participate in activism and change with humility, intentionality, and authenticity.

Service Focuses on Food Security

Cathy Kramer, Dean of Service

When addressing complex social problems, simple solutions are rare and food security is certainly no exception. This year the Service program at Warren Wilson is focusing a number of efforts on this community issue. Beginning with "new student orientation" Service Day in the fall, we encouraged students to consider all aspects of access to affordable, nutritious food for our community. With almost 400 students, faculty and staff working in the community, in one day we included sites that addressed raising food locally, distributing food equitably and providing resources for economic development related to food. In preparation for the day, students were educated about the social, environmental and economic factors related to food insecurity in our area leading to 1 in 6 of our Buncombe County residents seeking food assistance. The end of the day brought an opportunity for students to reflect on their experiences and consider the connections between the factors that lead to their neighbors' struggle to feed themselves and their families. With that base of experience, throughout this past year, groups of students have examined food security issues more deeply by participating in an "issue workshop" and a break trip to Detroit. Through these experiences students explore the connections between access to nutritious local food and the policies affecting this issue. As part of the program, direct service, education about issues and advocacy work will lead students to develop sustainable solutions related to feeding our community.

Fiber Arts Crew Diverts the Flow

Rachel Tutweiler, WWC '13, outdoor leadership major

Melanie Wilder, Fiber Arts Crew Supervisor

Over the past year and a half the Fiber Arts Crew has been working hard to create beautiful and useful recycled art. The mission of the Crew is to work through the Triad to utilize materials from campus that would otherwise flow into the waste stream. The Crew has two projects constantly in production that reflect Warren Wilson's commitment to sustainability. First, we craft rag rugs. To assist in keeping up with the flow of jeans and old clothes at the College's Free Store, we collect the surplus items and then cut them into long strips which we weave into rugs. The rugs are sold to students, staff, and faculty.

Our second ongoing project is making Plarn bags. These are tote bags made out of about 20 recycled plastic grocery bags each – bags that would ordinarily be thrown away and end up in a landfill. We take these bags, cut them into strips, and make balls of plastic yarn (aka plarn) that we then weave and sew into bags. The plastic strips are compacted together in the weaving process creating a very durable material that does not tear easily and holds up well to moisture. The Plarn bags are perfect for grocery shopping, carrying bathing material, or going to the beach. They generate income to support materials for other projects that educate us about a wide range of fiber crafts.



Sustainability Film Series Launches

Stan Cross, Environmental Leadership Center

Good documentary films provoke, inspire, and confirm. Such has been the case with the slate of films in the first annual Sustainability Film Series. The Environmental Leadership Center collaborated with Environmental Studies, Peace Studies, Spiritual Life, Multicultural Affairs, the RISE Project, Student Activities, Wellness, Service Learning, the Environmental Justice Crew, and Dining Services to bring films to campus that address complex environmental, social and economic issues.

The Series included "Coal Country," "The Cove," "Cruel and Unusual," "Transition Town 1.0," and "Food Inc." Each screening included panel discussions about the complex issues presented in the films and their relationship to life on campus and in the Southern Appalachian bioregion. Panelists included NASCAR driver and environmental activist Lelani Munter, representatives from Transmission Prison Project, Transition Town Asheville, and the Appalachian Sustainable Agriculture Project, as well as campus staff, faculty and student experts.

The Sustainability Film Series will continue next year. For film suggestions or to get involved contact Stan Cross at scross@warren-wilson.edu.

Do We Recycle!

Amy Peddie, WWC '09 and

Jessica Wooten, Director of Recycling and Waste Management

Ever since 1986, when Warren Wilson students wrote a proposal to the College to start a recycling center, the first in Buncombe County, the Recycling Crew has been on a mission to reach that elusive goal, “zero waste.”

Each year is marked by innovative new projects. Last year, as a Warren Wilson senior, Geneva Bierce Wilson led the Recycling Crew and volunteers in the construction of a cob building which will serve as the home base for our compost operations. Several campus work crews put up the pole structure and the roof frame, and Living Roofs, Inc worked with local organization Green Opportunities (GO) to install a green living roof, funded, in part, by a Campus Greening Seed Grant awarded to Geneva.

This year, we participated in the RecycleMania competition with 630 colleges and universities from around the country. RecycleMania lasts 8 weeks and has 9 categories of competition to see who recycles the most on a per capita basis, who produces the least amount of waste, and who recycles the largest percentage of their overall waste stream.

The Recycling Crew used results from their campus wide “garbology study” to target areas for improvements in waste reduction and recycling.

Another area of focus this year has been cutting down on the use of disposable plastic bags. The Recycling Crew is sewing bags made from found materials and these bags will be used (and reused!) in several buildings around campus in the paper recycling bins instead of disposable plastic bags. We are changing recycling collection for staff and faculty houses to a bagless operation, using curbside bins like many other city programs. And we have begun to recycle some new items through TerraCycle like candy bar wrappers, cookie packaging, energy bar wrappers, and Kashi packaging. Little by little, we are reducing what we send to the landfill.

We continue to compost 300 lbs of food waste in our GreenDrum in-vessel composter every day. We were very excited to partner with Danny's Dumpster this year, who collects our excess food waste and composts it at a regional permitted facility. We acquired and completely refurbished a second GreenDrum from UNC-Greensboro to handle our excess food waste on-site and we are excited to begin using the second drum soon. We continue to compost dorm food waste and are re-starting compost collection for offices and on-campus staff and faculty housing this semester. Last, we are experimenting with several small worm composting bins around campus and have also started brewing compost tea for the Landscaping Crew.



Ecology At the Crossroads



Emilio Espino, David Abernathy, Chris Fusting ('09)

Warren Wilson's International Programs is offering students a new study abroad course in collaboration with the Global Studies Department called “Ecology at the Crossroads: Conservation, Development and Globalization in Panama.”

The tension between globalization and conservation serves as the lens for classroom study and then fieldwork in Panama. Combining the analytical tools of environmental history, political ecology and geographic information science, students learn about the interdisciplinary basis of current environmental problems in Panama and apply some potential new solutions there.

Named the “most globalized country in Latin America” by the *Latin Business Chronicle*, Panama is also the intersection of two of the world's international biodiversity hotspots. Global Studies Chair and course leader David Abernathy sees great value in the course. “I'm excited to have our students get involved with larger efforts to

monitor biodiversity and analyze carbon banking. The fieldwork in Panama will also help drive research here on campus. Just yesterday I spoke with a student in the advanced GIS class about doing some research on carbon banking with a campus forest stand. There is potential for much transfer of learning from this global experience to our local issues.”

For more information, contact dabernathy@warren-wilson.edu.

International Programs Partners with Living Routes

Warren Wilson's International Programs go global with the College's mission and values up front. With an enduring commitment to travel sustainably and study the distinctive interdisciplinary markings of cultures around the globe, the Program has forged an agreement with Living Routes, a like-minded partner (http://www.livingroutes.org/programs/p_basics.htm). Living Routes mission is to “educate leaders with the wisdom, skills and experience to live more ecologically and socially sustainably through immersion in human-scale communities that are consciously striving to live well and lightly.” Qualified Warren Wilson students may enroll in one of their four semester programs based in Ecovillages in Israel, Costa Rica, Scotland and India. Interested students should contact the College's International Programs Office for more information at swithrow@warren-wilson.edu.

Re/Envisioning the City

This spring, Warren Wilson students had the opportunity to participate in a special interdisciplinary class about urbanism entitled “Re/Envisioning the City.” Team-taught by music professor Warren Gaughan, adjunct professor of sustainable development Michael Leahey, and creative writing professor Alicita Rodríguez, the course examines life in the city from multiple lenses and ultimately seeks to answer the question, “Is city living sustainable?”

As of 2010, the majority of the world's population abides in a metropolitan setting. This unprecedented concentration of society, culture, and economy marks a shift in the history of humanity and our impact on our environment. Thanks to a grant from the Arthur Vining Davis Foundations, Warren Wilson is able to offer this unique learning opportunity for their students – and their professors.

Dr. Rodríguez believes the interdisciplinary class has been invaluable: “This is a fantastic opportunity for professors to make connections across the curriculum, which helps students see the value of a liberal arts education. And teaching in multiple disciplines is a wonderful way for professors to get out of their own subject areas and learn new teaching methods. I'm hoping we'll get to use beakers and Bunsen burners at some point – objects that are very exotic to me as a writing teacher!”

Re/Envisioning the City also gets help from visiting instructors: economics professor Susan Kask and environmental science professor Laura Lengnick serve as roving experts. The class began with a study of general theory on cities – aspects of urban studies as varied as city planning and gender and race issues. The course continued with city case studies of Havana, Cuba; New York, New York; and Tokyo, Japan.

Sustainability Curriculum Crosses Disciplines

Since 2005, Warren Wilson has challenged its faculty to think deeply about how to teach sustainability throughout the curriculum – in the arts, the humanities, and the sciences. With a generous grant from the Arthur Vining Davis Foundations in 2007, the College invested in curriculum development and faculty workshops to explore interdisciplinary teaching and learning techniques that support a sustainability analysis of complex issues. Warren Wilson received a second grant from the Foundations in 2010 to fund a collaboration with Furman University to develop high quality, replicable sustainability curriculum.

This year, “energy” is the theme for the two Arthur Vining Davis sustainability courses team taught by faculty across the disciplines. For students who seek deeper understanding and hands on engagement with the topic of energy, there are also ten paid Environmental Leadership Center summer internships that support the curriculum with research, adaptation, and mitigation experiences.

Inter-disciplining Coal

Warren Wilson College professors Paula Garrett, Robert Hastings, and Jeff Keith are drawn from the three academic divisions within the College – Fine Arts & Humanities, Natural Sciences, and Social Sciences, respectively – and they see different things when they look at a lump of coal. Now they're working together, alongside their students, in a course called “Learning from Coal,” to integrate their understandings of this critical natural resource and consider how (or whether) it can play a role in creating a more sustainable future.

The class has learned that this ancient rock is combustible in multiple ways. Humans burn it, of course, for energy, but the fuel has also been at the heart of explosive labor disputes, hundreds of years of conflict over air quality, and contemporary debates about climate change and mountaintop removal mining.

Students have interacted with area filmmakers, musicians, and authors who have deep connections to the Appalachian coalfields. The class has visited Coal River Valley, West Virginia – a battleground between green energy advocates and companies that practice mountaintop removal mining. Finally, students have synthesized their work through multi-media projects integrating themes from the class and exploring how coal relates to society, economics, and the environment.

This course, made possible by a grant from the Arthur Vining Davis Foundations, is pushing both students and faculty to think across the curriculum in an effort to learn from a resource often taken for granted.



Classwork That Isn't In the Classroom

Many students expect the first day of classes to involve a review of the syllabus and an early departure. But 15 students had a different experience this spring in the Environmental Education Methods and Materials class. After an overview of the syllabus, they loaded into a van to interview low-income senior citizens at Battery Park apartments about their food traditions. The interviews were part of planning a partnership event focused on health and wellness in the garden held by Warren Wilson College and the Buncombe County Council on Aging. Located in downtown Asheville, Battery Park apartments boast a rooftop garden for its residents. The class also partnered with WD Williams Elementary School and Community High School, an alternative high school with a sustainable agriculture program, to offer two days of lessons on growing and cooking local food with the high school students, most of whom have not succeeded in traditional schools. The event involved 100 second graders, 20 high schoolers, and 15 Warren Wilson students.

Take A Summer Green Walkabout©

Stan Cross, Environmental Leadership Center

The Green Walkabout©, free and open to the public, provides a two-hour educational tour of Warren Wilson's nationally recognized sustainability initiatives. Learn how the 30,000 ft. view translates into action on the ground – from gardening to the built environment. See a community at work, learning together how to create just and sustainable community.

All tours are from 3:00-5:00 pm and begin at the College's LEED Gold Certified Orr Cottage (campus map at www.warren-wilson.edu/info/campus_map.php). Contact Stan Cross for more information: scross@warren-wilson.edu



ELC Education Director Stan Cross leads a Green Walkabout during the Mountain Green Conference. Tours highlight the campus' successes and challenges implementing more sustainable building, landscaping, agricultural, forestry, transportation, waste stream, energy use and storm water management practices.

Faith-Based Strategies

Warren Wilson College professor Mallory McDuff recently completed a book that shares stories and strategies of faith leaders and parishioners using their religious beliefs as a moral mandate for saving the earth. *Natural Saints: How People of Faith are Working to Save God's Earth* was published by Oxford University Press and documents stories from Western North Carolina to Washington State. Since publication in the fall of 2010, McDuff has been busy speaking to groups at home and across the country, as well as continuing to integrate this subject into her environmental education classes. *Natural Saints* highlights eight key ministries: protecting human dignity, feeding the hungry, creating sacred spaces, responding to natural disasters, promoting justice, making a pilgrimage, educating youth, and bearing witness. The issues addressed in the book, from growing food to promoting energy efficiency, reflect values of stewardship in houses of worship on a regional and national level.

Summer Schedule

Wednesday	June 8
Thursday	July 7
Monday	August 8

As the EMS Coordinator for eight Medical Centers in the Veterans Healthcare Administration who collaborates with Energy Engineers, it was encouraging to actually see concepts successfully implemented in the real world. It was also enlightening to acknowledge that change takes time and doesn't happen overnight and that small steps can lead to big accomplishments. So much of today's media is driven my negative images for the future of our country and our economy. It was refreshing to know that future generations such as the students at Warren Wilson are optimistic and putting ideas into action.

Green Walkabout© participant Wendy Kady, Asheville, NC

Tune in to the Swannanoa Journal

Araya Larson, WWC '14

The Swannanoa Journal is a weekly public radio program of WWC's Environmental Leadership Center (ELC). The program focuses on sustainability issues of environmental, economic, and social justice with essays that are written and recorded by WWC students at the studios of Asheville FM. Program manager Phillip Gibson of the ELC, faculty advisor Lockie Hunter, the Swannanoa Journal student crew, and students from writing

courses taught by Hunter and professor Catherine Reid, work together to keep a steady flow of Swannanoa Journals on the air year-round. Topics have ranged from discussions of landslide risks to the health of the Swannanoa River, the discovery of new species of invertebrates by a WWC professor, and our changing geological epoch. To listen to archived Swannanoa Journal recordings, visit www.warren-wilson.edu/~ELC/SwannanoaJournal/main.php

Swannanoa Journal

WNCW 88.7, Thursdays, 8 pm

Asheville FM on-line

Printed by Daniels Graphics – Asheville, NC



Printed on Environment by Neenah Paper (made with 100% post-consumer waste and processed totally chlorine free). Printed with vegetable oil-based inks.
Using 100% post consumer recycled paper saved 14 trees, 6,425 gallons of water, 4 min BTUs of energy (18 days of power for an average American household), 1,334 lbs. of emissions and 390 lbs. of solid waste!
These figures calculated using Environmental Savings Calculator at www.neenahpapers.com

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