

# UNIVERSITY OF VIRGINIA SUSTAINABILITY

ANNUAL REPORT

2014 - 2015



SUSTAINABILITY · UVA  
*From the Grounds Up*



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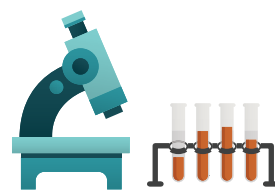
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# FOREWORD

## A MESSAGE FROM CO-CHAIRS OF THE COMMITTEE ON SUSTAINABILITY CHERYL GOMEZ AND MARK WHITE

Dear Friends,

We are delighted to share this report with you, which highlights U.Va.'s many achievements this year in advancing our commitment to sustainability. This work was accomplished through the dedication of hundreds of students, faculty, and staff throughout the University community who are deeply committed to sustainability.

In honor of this commitment, the Committee on Sustainability was reorganized and expanded this year to provide a stronger framework for the Schools, student groups, faculty, staff, and major academic and administrative units, including the U.Va. Foundation, to collaborate in advancing initiatives and ideas. In addition, the Committee is now co-chaired by one representative each from the academic and administrative communities and reports directly to all three executive vice presidents.

Efforts this year were framed around the Committee's charge, which is to: Foster the development and dissemination of sustainability knowledge through research and teaching (Discover); Promote the highest standards of sustainable practice on Grounds (Steward); and Engage the civic and academic communities in topics associated with sustainability (Engage). Each of these was addressed by a corresponding subcommittee and it is their work along with that of the many students, faculty, and staff in the University community that is reflected in this report.

Key successes this year include reducing water consumption by over 30% since the peak in 1999 and decreasing energy use per square foot by 4% since 2010 despite increases in population and square footage (10% and 6% respectively since 2009). Additional greenhouse gas emissions resulting from growth make the carbon goal challenging, but the 1% decrease below our 2009 baseline indicates that progress is being made to counter the emissions impact of growth. Other successes include launching a new major in Global Studies - Environments and Sustainability, and partnering with dozens of organizations and departments on outreach and engagement events such as the extremely well-received Earth Week.

Moving forward, we are particularly excited to be developing U.Va.'s first comprehensive Sustainability Plan, which will outline a strategic framework and articulate measurable strategies to be undertaken in upcoming years. Content for the plan is being developed collaboratively via various task forces in partnership with students. Specific actions will be further defined in a day-long sustainability retreat at Morven on August 21st with 70 faculty, student, and staff leaders from across Grounds.

We are especially grateful for the dedication and hard work of subcommittee co-chairs, working groups, and task forces, and the many other students, faculty, staff, and volunteers who have contributed to the impressive and successful projects and programs described in this report.

**Cheryl Gomez**  
Director of Operations

**Mark White**  
Associate Professor of Commerce



FROM  
THE  
GROUNDS  
UP





# SUSTAINABILITY STATEMENT

Sustainability at the University of Virginia calls for collaboration and ingenuity to promote the well-being of the community, solve local and global challenges through scholarship and practice, educate ethical leaders and steward this special place.

**STEWARD**  
Resources and People

**ENGAGE**  
Build Awareness, Inspire Action

**DISCOVER**  
Learning In Action



# EXECUTIVE SUMMARY

## ANDREA TRIMBLE- DIRECTOR, OFFICE FOR SUSTAINABILITY



(Left to right: **Cheryl Gomez** - Director of Operations, **Colette Sheehy** - Vice President for Management & Budget, **Andrea Trimble** - Director Office for Sustainability, **Mark White** - Associate Professor of Commerce, **Don Sundgren** - Chief Facilities Officer)

The University of Virginia, founded by Thomas Jefferson in 1819, is a community of 25,000 students and almost 13,000 faculty and staff. U.Va.'s Grounds feature Thomas Jefferson's Rotunda and Academical Village (a UNESCO World Heritage site) and over 525 buildings encompassing 16.5 million square feet. The U.Va. Health System includes a 604-bed hospital and Level I Trauma Center, with over 750,000 outpatient visits a year. This scale and history present incredibly interesting and promising opportunities, but also significant challenges.

The U.Va. 2014-2015 Sustainability Annual Report, issued by the University Committee on Sustainability, provides a snapshot of sustainability progress over the past academic year. The report is framed around our core approaches: **Steward** (how we steward our resources on Grounds), **Engage** (how we collaborate and interact with our U.Va. and local communities), and **Discover** (how we incorporate sustainability into our curriculum, research, and using our Grounds as a living lab for sustainability).

This year, U.Va. was one of nine institutes of higher education in the country to be recognized as a U.S. Department of Education Green Ribbon School. This award provides national recognition for the University's comprehensive and high-level achievement in environmental stewardship, wellness and sustainability education, which is led, implemented and utilized by thousands of students, faculty and staff across Grounds. Additionally, stakeholders across Grounds collaborated to submit an updated AASHE Sustainability Tracking, Assessment, and Rating System (STARS) report to benchmark progress in sustainability across four categories: Academics, Engagement, Operations, and Planning & Administration. In 2012, U.Va. achieved STARS Silver. This year, U.Va. achieved STARS Gold under an updated and more rigorous version of the rating system, testament to the progress that has been achieved in these areas.

The University continues to prioritize collaboration as a means of advancing sustainability. Progress is being made toward meeting the Board of Visitor's Sustainability Commitment, with reductions in greenhouse gas, nitrogen, and energy use intensity. In FY 2014-15, energy-saving activities yielded more than **\$4.6 million** in avoided costs and almost 14,000 tons of avoided greenhouse gas emissions (GHG) as calculated in terms of metric tons of carbon dioxide equivalent (MTCDE). Since FY 2007-08, conservation activities at the University have presented over **\$22 million** in avoided utility costs. The University has **39 Leadership in Energy and Environmental Design (LEED)** certified buildings, representing over **2.2 million square feet**. During CY 2014, the University recycled 3,241 tons of municipal solid waste (MSW). This yielded an MSW recycling rate of 32%. The University diverted an additional 5,074 tons of non-MSW material such as ash, tires, batteries, oil, and chemicals from a landfill, bringing the total recovered materials to 8,315 tons, a total diversion rate of 54% percent when all materials that can be recycled or reused are considered.

U.Va. currently offers over 160 undergraduate and over 150 graduate sustainability-focused or sustainability-related courses, with many included in the Global Studies – Environments + Sustainability Major and the Global Sustainability Minor. Additionally, 24 departments currently engage in sustainability-related research.

We welcome involvement and ideas from U.Va. students, faculty, staff, and the local community.

Please contact us to get involved! Visit: [sustainability.virginia.edu](http://sustainability.virginia.edu) or email us at [sustainability@virginia.edu](mailto:sustainability@virginia.edu).



# ENGAGE

## Civic Engagement Knowledge

U.Va.'s sustainability outreach programs, events, and campaigns, build sustainability literacy and awareness across the University, which translates into action. A strong network of sustainability committees empowers individuals to enact change.

## ANNUAL EVENTS

<b>JAN</b> SustainaMondays	<b>FEB</b> RecycleMania
<b>MAR</b> Game Day Challenge World Water Day	<b>APR</b> Earth Week
<b>MAY</b> Chuck it for Charity	<b>JUN</b> UVA Saves Hour
<b>JUL</b> Student Orientation	<b>AUG</b> Sustainability Retreat
<b>SEP</b> Litterati Campaign	<b>OCT</b> Dorm Energy Race Game Day Challenge
<b>NOV</b> U.Va. Sustainability Days	<b>DEC</b> Finals Week Events

## ONGOING PROGRAMS



### Green Workplace Program

GWP is a 60 credit checklist that engages U.Va. employees and workplaces in actions that conserve energy, save money, and advance sustainability.



### Sustainability Advocates

Sustainability Advocates utilizes a peer to peer student network to instill knowledge, empower students, and create awareness of the impact of decisions.



In calendar year 2014, U.Va. recycled 32 percent of its municipal solid waste (MSW), which represents 3241 tons of paper, cardboard, plastic, glass, and metals. Other non-MSW material were also recycled, totaling 5074 tons.



Total water consumption in FY 2015 has been reduced 4.5% compared to the prior year and more than 32% since the 1999 peak despite an increase in square footage and the number of faculty, staff, and students.

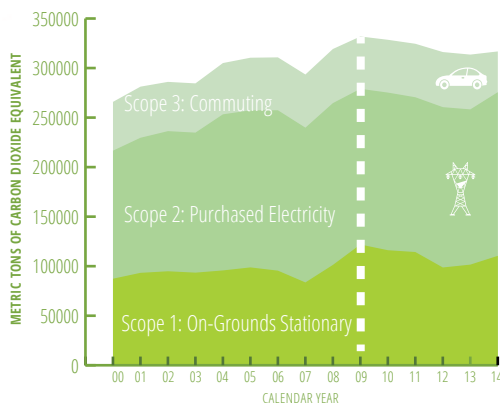
As a partner in the U.S. Department of Energy's Better Buildings Challenge, U.Va. has set a goal to reduce building energy use intensity 20% by 2020 below a 2010 baseline.



# STEWARD

## Stewardship of Grounds, Finances, & People

### GREENHOUSE GAS EMISSIONS 2000-2014



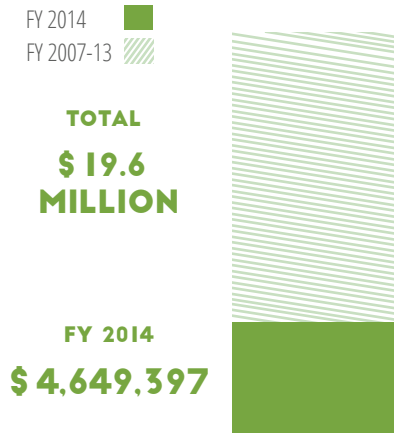
To date, U.Va. has achieved a 1% reduction in greenhouse gas emissions and a 4% reduction in building energy use intensity despite an increase in overall square footage.



U.Va.'s Transportation Demand Management Program provides multi-modal options for students, faculty and staff, including a bike share program consisting of 125 bikes.

## DELTA FORCE PROGRAM

### AVOIDED COST (\$)



Delta Force is a building efficiency initiative. With an avoided cost to date of nearly \$20 million, the simple return on investment is 2.5:1 since the program's inception.



The University has over 38 LEED certified buildings and one of the oldest LEED buildings in the nation.



U.Va.'s Building Services cleaning practices contribute to U.Va. holding one of only three Green Seal certifications in higher education.

## CURRICULUM



## DISCOVER

### Interdisciplinary Learning

#### RESEARCH



U.Va. was the first institution in the world to commit to reducing reactive nitrogen. U.Va. researchers developed tools for tracking nitrogen footprints, which are now used internationally.



96  
Graduates  
With Minor

Global Studies - Environments + Sustainability Major & Minor: This interdisciplinary major and minor address problems associated with human transformations of the earth through the triple lens of environment, equity, and economy.



Morven Summer Institute: The Morven Summer Institute is an innovative summer program hosted on U.Va's 3,000-acre farm. Students with interests in sustainability, design, food systems, and ecology have the opportunity to learn outdoors.



## AWARDS

### Recognition For Excellence





# COLLABORATIVE GOVERNANCE

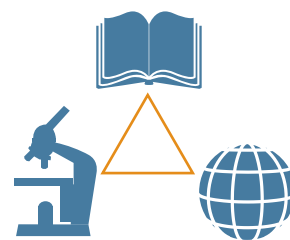
## PROGRESS THROUGH PARTNERSHIPS

One of the Principles for Implementation in U.Va.'s Cornerstone Plan is collaboration: *"We will make collaboration an institutional hallmark. We will view collaboration not only as a technique to leverage our size to maximum advantage but also as a critical source of innovation."* Collaboration and progress through partnerships are of paramount importance to successfully advance sustainability at U.Va. To this end, the University has sought means of bringing together students, staff, and faculty to contribute their interests and expertise to develop and implement sustainability-related initiatives, projects, and programs.

The University Committee on Sustainability, co-chaired by Cheryl Gomez (Director of Operations) and Mark White (Associate Professor of Commerce, Director – McIntire Business Institute), advises the

Executive Vice Presidents on all matters related to the University's commitment to sustainability and how those impact the future of the University, including interrelated environmental, financial, teaching, research, and social aspects. In carrying out this charge, the Committee is engaged in the following:

- Fostering the development and dissemination of sustainability knowledge through research and teaching.
- Promoting the highest standards of sustainable practice on Grounds.
- Engaging the civic and academic communities in topics associated with sustainability.
- Contributing to and reporting on progress in achieving the University's sustainability goals.



This year, thirty members were appointed to the Committee on Sustainability from across the University. The Committee's monthly meeting discussions in 2014-2015 included revising the committee organization and revising the committee charge. Discussions focused on zero waste, purchasing, and community engagement via the Georgetown Energy Prize. Three subcommittees – Environmental Stewardship, Civic Engagement, and Teaching and Research – and dozens of working groups and task forces were active in implementing projects and strategic planning – which is further detailed in subsequent sections. Over 100 students, staff, and faculty are actively involved in these groups.

The Office for Sustainability, which is housed in Facilities Management, supports university-wide collaborative governance. Office for Sustainability staff support the majority of the working groups, programs in sustainable buildings and operations, recycling and waste management, outreach and engagement, and communications, and partner with others across the University on projects and programs. This year, the Office for Sustainability and Office of the Architect convened an AASHE STARS team comprising key subject matter experts who completed the STARS credits across four content areas: academics, engagement, operations, planning & administration.



A prompt was used to generate ideas for U.Va.'s sustainability five year plan.

Students are also striving to connect and collaborate to elevate sustainability progress at U.Va. Monthly SustainaForums were organized by the Student Council Sustainability Committee. These meetings brought together leaders from sustainability-focused student organizations to promote collaboration and to build awareness on each group's initiatives. Sustainability-related engagement events were held at least monthly, including two major events : **U.Va. Sustainability Days** and **Earth Week**.

In August 2014, guided by the new sustainability slogan and Sustainability Statement, approximately sixty key leaders and sustainability champions (faculty, staff and students) from across U.Va. gathered for a Sustainability Retreat at Morven Farm. The group expanded upon the four action items in the Statement to explore how both our current efforts and potential new ones will ensure that the University both lives up to the Statement and evolves beyond it. In break-out groups, the teams pondered:

1. How do we expand successful collaborations?
2. Are there new ways we can collaborate?
3. How can we engage others in sustainability?

The four groups reviewed the four objectives of the Statement, specifically under the lenses of collaboration and ingenuity:



1. Promote the well-being of the community
2. Solve local and global challenges through scholarship and practice
3. Educate ethical leaders
4. Steward this special place

Two break-out sessions were held after the retreat: a student-sustainability staff working session, to coordinate communication efforts, and a student-only session, for student organizations to coordinate plans for the upcoming year.

Also in August 2014, U.Va. hosted the first annual meeting of the Virginia Association for Sustainability in Higher Education (VASHE), with 30 attendees representing 13 schools. Common themes in the discussions included the power of competitions as a tool for behavior change, the desire for each school to be a leader in sustainability initiatives, and the importance of engaging students. Staff and faculty were also active in collaborative discussions with the first 4-VA Sustainable Food Symposium, which brought together academic and operational staff from VT, JMU, George Mason, and U.Va.

The Committee on Sustainability began development of U.Va.'s first Sustainability Plan by exploring ways that U.Va. can 'engage', 'steward', and 'discover' to advance sustainability in the next 5-10 years. Several task force groups were formed to evaluate potential goals in topic areas, such as waste, water, energy, and emissions. Additionally, a group of student leaders were formed to gather feedback from students. This process will continue into fall 2015.





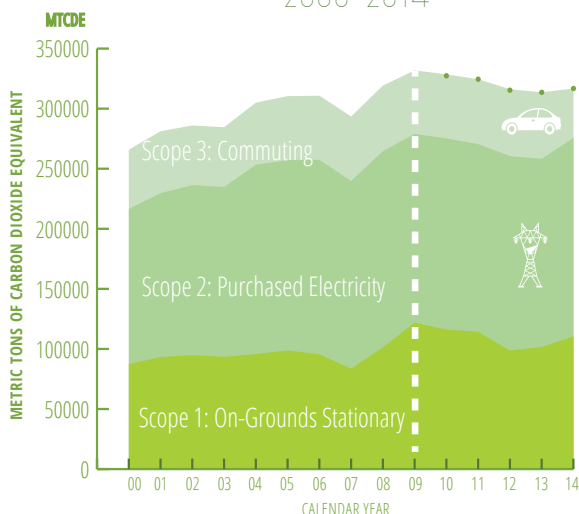


# STEWARD

## RESOURCES & PEOPLE

### GREENHOUSE GAS EMISSIONS

2000-2014



U.Va.'s greenhouse gas (GHG) reduction goal is a 25% reduction below 2009 levels by 2025 and includes scope 1, 2 and some scope 3 emissions. After achieving a 5.5% reduction from 2009 to 2013, growth and weather contributed to an increase in the past year, leading to a 1% overall decrease since 2009. Growth in both total square footage, population, as well as increases in the need for heating or cooling due to weather continue to make this a challenging goal. Since the 2009 baseline, U.Va.'s population has increased by 10% and square footage has increased by 6%. Greenhouse gas intensity (metric tons of carbon dioxide equivalent per person or per square foot) continues to decrease. For more details, see U.Va.'s CY 2014 Greenhouse gas report.



## NITROGEN COMMITMENT



4%

REDUCTION  
IN ENERGY USE INTENSITY



21,000 MTCDE  
AVOIDED

**Nitrogen:** In September 2013, U.Va. became the first university in the nation to set a nitrogen goal when the Board of Visitors amended the approved Sustainability Commitment to include a goal to reduce the amount of reactive nitrogen lost to the environment to levels 25% below year 2009 amounts by the year 2025. A full update on progress will be calculated by Fall 2015.

**Energy:** U.Va. is making progress towards achieving a quantifiable energy reduction goal by participating in a national effort, the Department of Energy's Better Building Challenge, which was launched by President Obama in 2011. U.Va. is seeking to reduce the energy use intensity of 15 million square feet of the University's buildings 20% below 2010 levels, by 2020. To date, a **4% reduction in building energy use intensity** (kBtu per square foot) has been achieved.

In FY 2014-15, energy-related activities yielded more than **\$4.6 million** in avoided costs and almost **21,000 tons** of avoided greenhouse gas emissions as calculated in terms of metric tons of carbon dioxide equivalent (MTCDE). Since FY 2007-08, conservation activities at the University have presented over **\$22 million** in avoided utility costs.

# BUILDINGS & OPERATIONS

## LIVE, WORK, AND LEARN IN A SUSTAINABLE PLACE

**Delta Force:** Delta Force is an existing building efficiency initiative led by a team of engineers in Facilities Management. Since FY 2007-08, \$7.9 million has been invested in the Delta Force retro-commissioning initiative. With an avoided cost to date of nearly **\$19.6 million**, the simple return on investment is 2.5:1 since the program inception. Buildings undertaken this year include Clark Hall, Newcomb Hall, and Hereford College.

**Lighting:** Facilities Management, with the help of student workers, continues to identify and upgrade inefficient lighting fixtures throughout the University. This year eight facilities were selected for full building relamping. In addition, 155 exterior pole lights, bollards & other exterior lights were converted to LEDs. These projects saved the University **\$97,300** in electricity costs in FY 2014-15 because they were completed mid-year. These lighting projects are estimated to save the University over **\$130,000** annually.

**Other Conservation Projects:** Other conservation projects in FY 2014-15 included steam trap improvements and improvements to heating & chilled water distribution.

### AVOIDED COST (\$)

FY 2014 ■  
FY 2007-13 ▨

TOTAL  
**\$ 19.6  
MILLION**

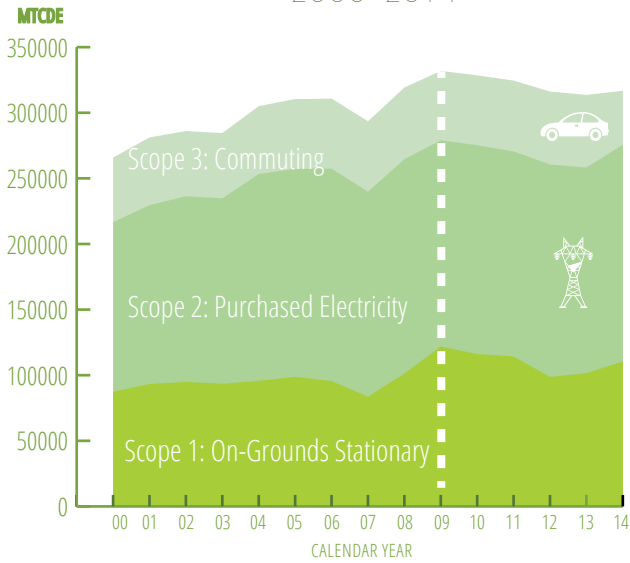
FY 2014  
**\$ 4,649,397**



**\$ 97,300  
SAVED**

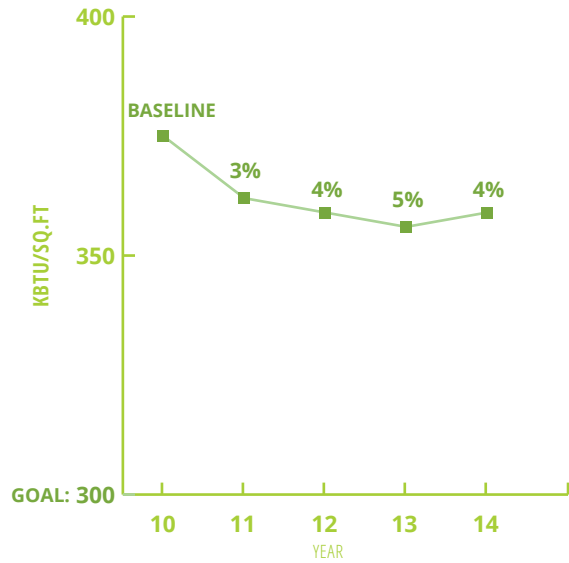
## GREENHOUSE GAS EMISSIONS

2000-2014

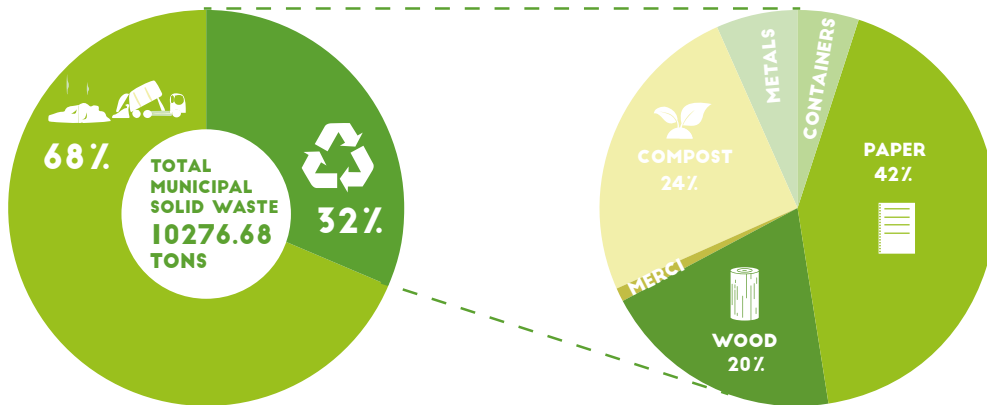


## ENERGY USE INTENSITY

PERCENT IMPROVEMENT FROM BASELINE

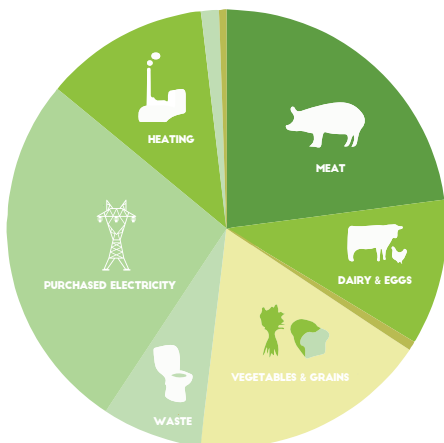


# RECYCLING & WASTE

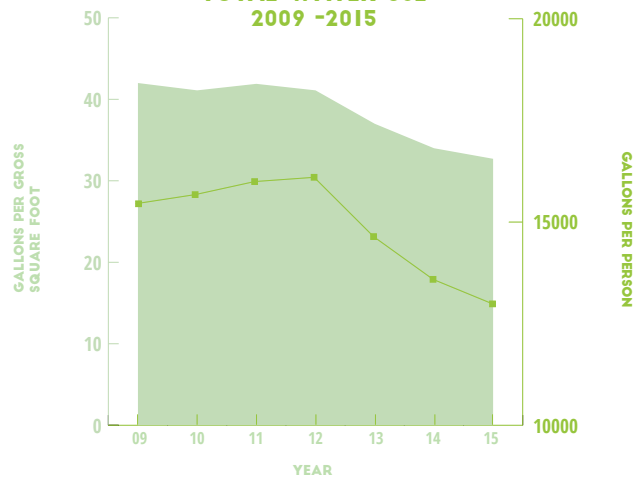


# NITROGEN & WATER

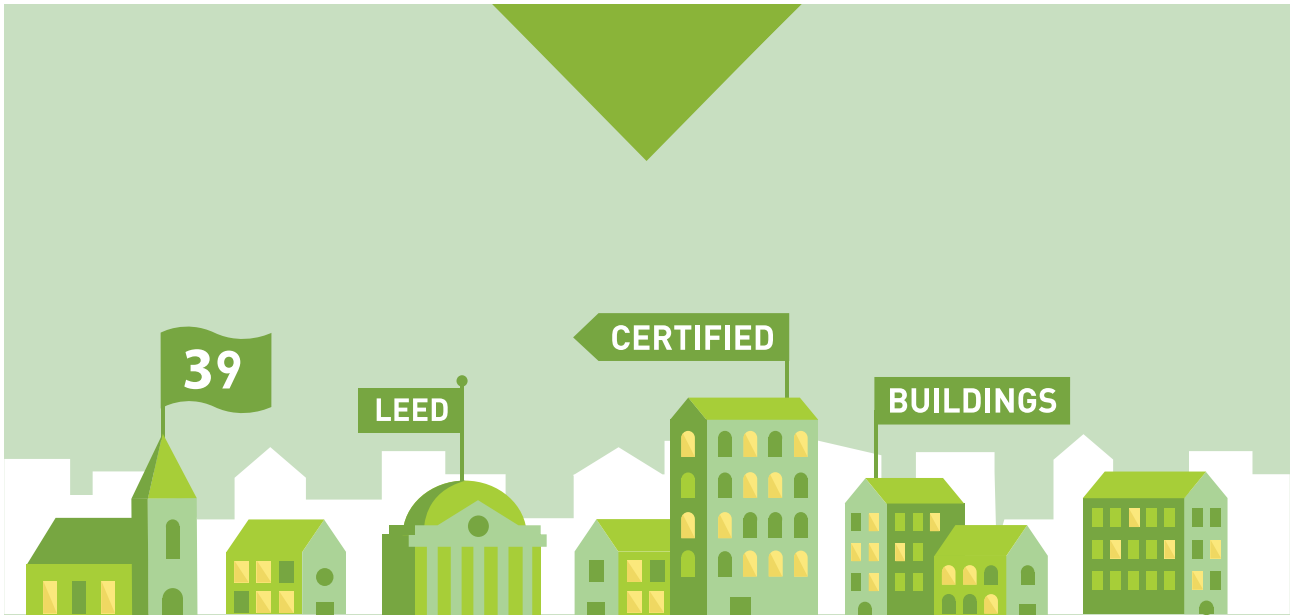
UVA 2010 NITROGEN FOOTPRINT  
515 MTN



TOTAL WATER USE  
2009 -2015







**New Construction:** The University has 39 LEED certified buildings, representing over 2.2 million square feet. New LEED certifications in the past year have included:

- Ruth Caplin Drama Addition – Silver (October 2014)
- Jordan Hall 7th Floor Renovation – Certified (October 2014)
- Battle Building – Gold (February 2015)
- North Grounds Recreation Center Addition – Silver (March 2015)
- CRU/ Neurosurgery Clinic Renovations – Silver (April 2015)
- Pavilion X – Certified (April 2015)

**Water:** The University’s total **water usage is down 4.5%** this fiscal year compared to the prior year. Three condensate recovery systems reclaimed over 844,170 gallons of water this year from building air handling units, which was then used to produce chilled water in the chiller plants.

**Materials and Waste:** During CY 2014, the University recycled 3,241 tons of municipal solid waste (MSW). This yielded and **MSW recycling rate of 32%**. The University diverted an additional 5,074 tons of non-MSW material such as ash, tires, batteries, oil, and chemicals from the landfill bringing the total recovered materials to 8,315 tons, a total diversion rate of 54% percent when all materials that can be recycled or reused are considered.

New initiatives or notable ongoing projects contributing to U.Va.’s waste diversion included:

- Student Council passed a resolution that all events funded by StudCo must strive to be zero waste. The fall Pancakes for Parkinsons event alone diverted 670 pounds of compostable materials from landfills.
- Athletics and U.Va. Dining partnered with U.Va. Sustainability to introduce composting in the Scott Stadium suites for home football games, with support from a \$3,000 Charlottesville Area Community Foundation Eco-Living Grant. **Over 7.6 tons of materials were diverted from landfills** over the course of the season.

- U.Va. Reunions Weekend organized several zero waste events (compostable or recyclable materials and bins for both) to minimize landfilled waste: the Virginia Wine Festival, Class of 1990 Welcome Back Dinner, Class of 2010 Flashback Friday Dinner, Engineering School Luncheon, and the Class of 2000 Taste of Virginia Dinner.
- The Health System Sustainability Committee continued its monthly Reusable Office Supply Exchange (R.O.S.E.) and its Medical Equipment Recovery of Clean Inventory (MERC) program, which gives individuals a place to donate and/or pick-up used supplies.

Additionally, student-led projects such as a composting pilot in Campbell Hall and Cans to Cans (which collects aluminum cans from Greek Houses, sells them back, and gives the proceeds to a local charity), increased awareness.



**Food:** U.Va. Dining has achieved Marine Stewardship Council certification, which allows U.Va. Dining to provide certified sustainable wild-caught seafood in three residential dining locations (Newcomb Hall’s Fresh Food Company, Runk, and O’Hill). The certification ensures that the seafood is never mixed or substituted with non-certified seafood at every step of the supply chain.

The Health System’s UTeam and Hoo’s Well teamed up to organize a weekly Farmers Market on Hospital Drive during the summer, which provides local and healthy food options on Grounds.

The University continued food composting programs for Shea House, West Range, The Castle, the Fine Arts Café, all U.Va. Dining facilities, Darden, and the Medical Center.

Programs such as the reusable mug rewards, reusable to-go-boxes, trayless dining, and Meatless Mondays continue to be important means of engagement and waste diversion.



**Transportation:** U.Va.'s UBike program launched this year, which provides a brand-new mobility option on Grounds for students, faculty, staff, and visitors via a 120-bicycle, 17 station bicycle share system. Parking & Transportation also expanded the Bike Ambassadors program and held bike safety classes and maintenance workshops.

Since 2013, the University of Virginia has been deemed a Bronze-Level Bicycle Friendly University by the League of American Bicyclists in recognition of its efforts to promote bicycling in five primary areas: engineering, encouragement, education, enforcement, and evaluation.



**Equity and Wellness:** U.Va. Sustainability and Hoo's well teamed up to launch a Sustainability and Wellness video, with tips for a healthier planet and you featuring three ways that U.Va. employees can increase their wellness while reducing their environmental impact.





# ENVIRONMENTAL STEWARDSHIP SUBCOMMITTEE

## LEADERSHIP THROUGH DIRECT ACTION

### WORKING GROUPS:

- ENERGY
- TRANSPORTATION
- STORMWATER
- WATER
- OPEN SPACE
- LABS
- GREEN DINING
- MATERIALS
- LIGHT POLLUTION
- PROCUREMENT
- GREEN IT
- NITROGEN
- HEALTH SYSTEM

### TASK FORCES

- ENERGY AND EMISSIONS REDUCTION GOAL
- WASTE, RECYCLING, GRAPHICS AND STANDARDS
- WATER REDUCTION GOAL
- ZERO WASTE PROJECTS
- WASTE REDUCTION GOAL

**T**he Environmental Stewardship Subcommittee (ESS), a subcommittee of the University Committee on Sustainability and co-chaired by Don Sundgren and Andrea Trimble, promotes and enables environmental stewardship via student, staff, and faculty engagement in direct action on Grounds. ESS consists of 13 working groups and 5 task forces, each of which is typically co-chaired by a staff/faculty member and a student, which work collaboratively throughout the year to accomplish their yearly objectives in each topic area. Working groups undertake projects on Grounds that can be implemented within an academic year. Task forces develop longer-term strategies and projects.

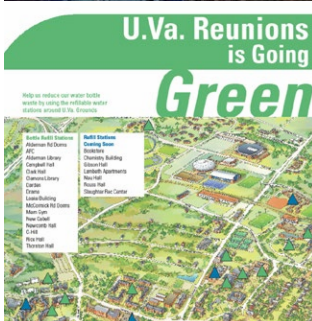


This year, ESS added four new working groups: Green IT, Green Labs, Sustainable Procurement, and Nitrogen. ESS also established two new task forces: an Energy and Emissions Reduction Goal Task Force, and a Water Reduction Goal Task Force.

**13**  
WORKING  
GROUPS

**5**  
TASK  
FORCES





**Goals:**

- Engage a wide range of students, staff, and faculty in sustainability discussions that advance sustainability, both within the subcommittee and across Grounds
- Enable students, staff, and faculty to take action by implementing stewardship projects on Grounds
- Advance university-wide stewardship goals and strategies

**Objectives:**

- Implement stewardship projects within each of the working group categories
- Demonstrate measurable progress in each area of stewardship represented by the working groups
- Convene stakeholders to contribute expertise and energy to document and advance university-wide stewardship visions, goals and strategies, in support of a larger U.Va. Sustainability Plan

For more detailed information on each of the working groups and task forces, check out the [Environmental Stewardship Subcommittee 2014-2015 Annual Report](#).



# ENGAGE

BUILD AWARENESS, INSPIRE ACTION



## OUTREACH PROGRAMS

### ENGAGING CHANGE AGENTS

Through engagement with U.Va.'s students, staff, faculty, as well as the wider community, we seek to build sustainability awareness across the University, and to translate that awareness into critical thinking about actions and decisions. A strong network of sustainability committees, programs, events, working groups, and student organizations empowers individuals to enact change.

#### Green Workplace Program:

The Green Workplace Program engages U.Va. employees and workplaces in actions that conserve energy, save money, and advance sustainability. The Green Workplace Program includes 60 actions workplaces can implement to be more sustainable. Credits range between one and five points, based on the anticipated level of effort required to implement each credit. Participants report their actions and earn a Green Workplace certification based on

the total points achieved. Currently 13 workplaces in six departments representing 1,350 staff members are participating in the program. These include, Human Resources, Batten Institute, Weldon Cooper Center, Facilities Management, Parking & Transportation, and the Office of the Architect.

13 OFFICES  
1,350 STAFF





**Sustainability Advocates:** The mission of Sustainability Advocates is to use a peer to peer student network to build knowledge, empower students, and create awareness of the impact of daily decisions. Last year, fifty students were selected to be Sustainability Advocates.

**Sustainability Student Employees:** Fifteen students worked 4-20 hours per week amongst four teams: Recycling, Energy & Water, Promotions, and Student Outreach. These students were instrumental in planning and implementing the many sustainability events and campaigns throughout the year.

**Sustainability Partners:** Sustainability Partners, a group open to all employees at U.Va., met monthly in a brown bag lunch format to hear from speakers on various topics, such as Getting to Know your Watershed.



**Energize!Uva and Energize!Charlottesville:** U.Va., with the support of President Sullivan, has partnered with the City of Charlottesville in support of Energize!Charlottesville. Energize!Charlottesville is a two-year campaign devoted to saving energy as a community in hopes of winning the \$5 million Georgetown University Energy Prize. Fifty-eight percent of residents in the City of Charlottesville live in rental properties, so mobilizing property managers and owners could significantly boost Charlottesville's chance of winning. As a start, U.Va. has partnered with the Blue Ridge Apartment Council to expand the student Sustainability Advocates program to off-Grounds housing.





**JAN**  
SustainaMondays

**FEB**

RecycleMania



**MAR**



Game Day Challenge



World Water Day

**APR**

Earth Week



**MAY**



Chuck it for Charity

**JUN**

UVA Saves Hour



**JUL**

Student Orientation

**AUG**

Sustainability Retreat

**SEP**



Litterati Campaign

# OUTREACH EVENTS

## CELEBRATE AND EMPOWER

Sustainability events were held throughout the year, including two keynote events: **U.Va. Sustainability Days** and **Earth Week**. These were planned collaboratively via the Outreach Events Task Force – a combination of students and staff, as well as several student organizations.

**October: Energize!UVA and Dorm Energy Race:** First year residence halls competed against each other to see which area could most greatly reduce electricity consumption per capita. Daily tips and trivia kept students engaged and spurred the competition. Gooch Dillard won the Dorm Energy Race with a 14% reduction. They were rewarded with a tour of the Rotunda under renovation.

**Football Game Day Challenge:** By collecting compost from suites and concessions and organizing volunteers to collect recyclables in tailgating lots, U.Va. Sustainability, Athletics, and Dining, and over 100 volunteers diverted **29,029 pounds** of waste from the landfill at the Homecoming game against UNC. In this national competition sponsored by the EPA, **U.Va. placed first in the ACC** and seventh in the nation for recycling, waste reduction, and greenhouse gas reduction.

**November: U.Va. Sustainability Days:** Two days in November focused on celebrating and brainstorming sustainable solutions on Grounds. Events included a Global Sustainability course poster competition, a zero waste innovation workshop, a nitrogen footprint workshop, a screening and panel discussion on the film 'Disrupted' and a student-produced video about the Climate March in New York. The keynote event, Hoos Talking Green, brought together six faculty around grounds in a 7-14-28 format: a seven minute time limit, no more than 14 slides, and a minimum of a 28 point font size on the slides.

**February: Recyclemania:** U.Va. continued its participation in an eight-week national competition to reduce the amount of waste going to landfills and to build awareness of the impacts of waste.

**Basketball Game Day Challenge:** As part of Recyclemanina, **100 volunteers** pitched in to assist with composting and recycling at a sold-out home basketball game versus Virginia Tech. Approximately **3,373 tons of waste** was diverted from landfills.

**April: Earth Week:** From April 19 – 24, U.Va. celebrated Earth Week 2015, an action-packed week that brought together students, faculty, staff, and community members to build awareness and foster stewardship of U.Va.'s Grounds and beyond. The celebrations began with the "Big Spring Thing", in the O'Hill Student Garden - local food, a gardening workshop, and a free potted plant for each attendee. The Student Council Sustainability Committee held an event in Garden V for prospective

students attending Days on the Lawn to talk to current students and staff about sustainability. A SustainaSupper, hosted by Green Grounds and FeelGood, brought students, staff, and local community members together for an evening of informal pitches sustainability-related projects and community feedback.

The SustainaBanquet, hosted by the Student Council Sustainability Committee, celebrated sustainability

leaders on Grounds by presenting awards to students, faculty, staff, and CIOs for an outstanding commitment to sustainability throughout the school year. Opening remarks were delivered by Executive Vice President Pat Hogan.

**100**  
**VOLUNTEERS**  
**3,373**  
**TONS OF WASTE**

The officially recognized celebration of Earth Day took place on Wednesday, April 22. Wednesday's Earth Week Expo in Newcomb Ballroom included a keynote address called "Hoos Talking Green," a set of presentations and a panel discussion with five sustainability leaders from across Grounds, including three faculty members, one staff member, and one student. The event also included exhibits highlighting U.Va.'s innovative sustainability research and practices, as well as the 7th annual U.Va. Student Sustainability Poster Competition.



**May: Chuck It for Charity:** Chuck It for Charity is an annual collection drive to enable students to donate their unwanted furniture, appliances, electronic equipment, non-perishable food and clothing to local charities during move-out week. Chuck It for Charity is offered to students residing on and off Grounds. Collection sites were set up during final exams both on-Grounds and off. A total of **23,556 pounds of materials** were collected from on-Grounds students – the majority was clothes – over 5,100 pounds.

## CIVIC ENGAGEMENT SUBCOMMITTEE

**T**he **Civic Engagement Subcommittee**, co-chaired by Kristin Morgan and Nina Morris, is a subcommittee of the University Committee on Sustainability that works to expand and deepen sustainability into the U.Va. community, both on and off of Grounds. This subcommittee seeks to promote, engage, and advocate for policies and practices that build an inclusive, safe, healthy, and equitable community aligned with environmental principles to advance the well-being of this and future generations. To this end, the subcommittee's goals focus on outreach/engagement, diversity/affordability, and health/wellbeing. **Objectives for 2014-2015:**

- Cultivate existing city/county/university partnerships and undertake a specific initiative together.
- Reach out to the BOV as a stakeholder group, identify a BOV committee most closely related to sustainability, and cultivate relationships with committee members to promote the work of the University Committee on Sustainability and Civic Engagement, and infuse sustainability into the implementation of the Cornerstone Plan.
- Identify areas needing more engagement in order to attract a broader group of stakeholders.
- Reach out to minority student groups and Diversity Council to broaden awareness of the sustainability opportunities, including the GIFT grant.
- Identify a few specific initiatives, such as bikeshare, which could benefit more diverse stakeholders.

Each of the working groups and task forces are led by two co-chairs (typically a student and a faculty/staff member), who facilitate discussions and assist the working group in implementing projects.

- **The Outreach Working Group:** Implements projects or programs to build U.Va. sustainability identity and individual sustainability awareness.
- **Outreach Events Task Force:** Organizes and manages events through out the year.

**chuck.it**  
**FOR charity!**

**DONATE CLOTHES,  
SCHOOL SUPPLIES,  
FURNITURE,  
NONPERISHABLE  
FOOD, ETC...  
—AS YOU MOVE  
OUT THIS SPRING!**

**DROP OFF DONATIONS AT THE STUDENT ACTIVITIES  
BUILDING OR UVA RESIDENCES**

**APRIL 30 - MAY 12**



# O'HILL DINING WASTE AUDIT RESULTS

On February 18, U.Va. Dining and the Office for Sustainability conducted a waste audit for RecycleMania at O'Hill Dining.

## WHAT IS FOOD WASTE?

Food waste results from throwing away food, which could have been eaten.

**1.3 Billion** tons of food is wasted each year.



That's equivalent to 33% of total global food production.

In the U.S. **\$48.3 billion** worth of food is thrown away each year.



Most of the food waste, 4.1 million tonnes or 61% is avoidable and could have been eaten.

## AUDIT RESULTS



**215.8 Lbs**

of food waste captured at the dish return station.

**1,094**



people served between 11:00am to 2:00pm

### Individual Breakdown



0.591 Lb per day

4,137 Lbs per week

215.8 Lbs per year



**194,220**

Lbs of food wasted each year by students at O'Hill Dining.

### REASONS TO REDUCE WASTE

1. Organic waste is the second highest component of landfills, which are the largest source of methane emissions.
2. Food loss and waste also amount to a major squandering of resources, including water, land, energy, labor and capital.
3. Join the clean plate initiative, only take as much as you plan to eat. If you're still hungry then go for seconds.

Sources:

<http://www.unep.org/wed/2013/quickfacts/>



[WWW.VIRGINIA.EDU/SUSTAINABILITY](http://WWW.VIRGINIA.EDU/SUSTAINABILITY)



# SUSTAINABILITY FORUM



OCT 17

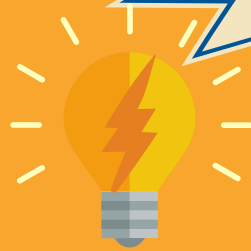
WAYS TO



SAVE

NO IMPACT CONCERT  
Oct 16, 5:30pm Amphitheatre

ENERGIZE UVA



LIGHT

FIRESIDE CHAT  
Jesse Warren & Ricky Patterson  
Oct 29 TBD



CLIMATE

FILM SCREENING  
*Damnation*, Nov 5

WEEK 1

Take Charge and Unplug

WEEK 2

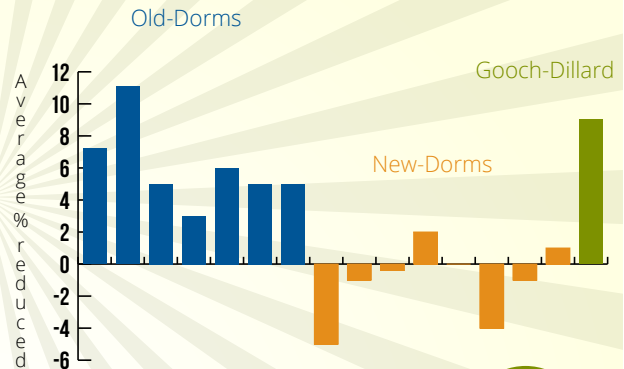
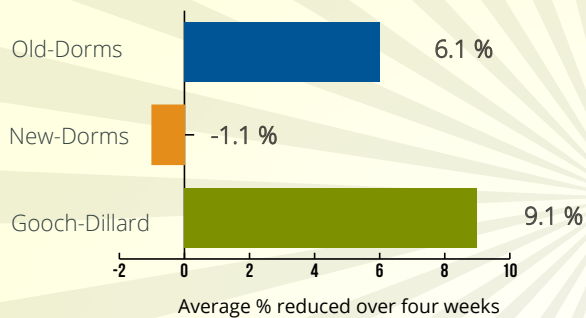
Don't Be Afraid of the Dark

WEEK 3

Trick or Treat on the Lawn

DORM ENERGY RACE

FINAL RESULTS



GOOCH-DILLARD

Average reduction of 9.1% over 4 weeks.



18.55 METRIC TONS OF CARBON DIOXIDE EQUIVALENT

THE COMBINED ENERGY REDUCTION BY THE DORMS OVER 4 WEEKS IS EQUIVALENT TO AVOIDED EMISSIONS OF 18.55 METRIC TONS OF CO2.



2,087

GALLONS OF GASOLINE CONSUMED



485

INCANDESCENT LAMPS SWITCHED TO CFLS



43.1

BARRELS OF OIL CONSUMED



476

TREE SEEDLINGS GROWN FOR 10 YEARS



15.2

ACRES OF U.S. FORESTS IN ONE YEAR



0.143

ACRES OF U.S. FORESTS PRESERVED FROM CONVERSION TO CROPLAND IN ONE YEAR



0.005 WIND TURBINES



That's equivalent to the emissions from

733

propane cylinders used for home barbecues



WWW.VIRGINIA.EDU/SUSTAINABILITY



SUSTAINABILITY · UVA  
From the Grounds Up

GO

ZERO WASTE

START COMPOSTING!

photo credit: Joi Ito

Learn how you can get involved with [Composting at U.Va.](#)

### BENEFITS

- Reduce the volume of waste sent to the landfill.
- Decrease the number of trips required off grounds to dispose of waste.
- Create valuable fertilizer and mulch used to beautify U.Va.'s landscape.
- Reduce harmful greenhouse gases emitted from materials in the landfill.
- Reduce waste disposal fees.

### RESOURCES

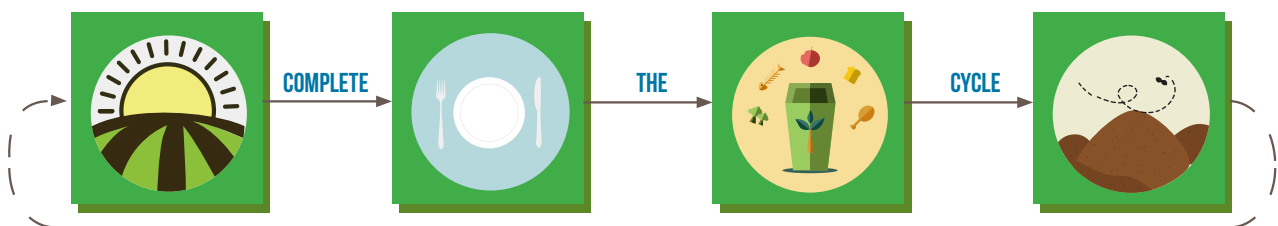
City of Charlottesville: Guide to composting  
Zero Waste Event Guide: [www.virginia.edu/zero-waste-events](http://www.virginia.edu/zero-waste-events)  
BlackBear: [info@blackbearcomposting.com](mailto:info@blackbearcomposting.com) 888-666-4172

### HOW TO COMPOST

**On Grounds:** There are 20 dining locations on grounds that compost their food waste. In select locations, such as: Fine Arts Café, Shea House, West Range Café, and The Castle, visitors are advised to sort their waste into the proper bins.

**Off-Grounds:** If you live in Charlottesville, contact Black Bear Composting Service at 888-666-4172 to schedule a pick up from your home. It will save you money from reduced waste disposal fees.

**At Home:** Start a compost pile in your backyard. All it takes is a sealed plastic container, where you store your vegetable peels, apple cores, and other plant based food waste. Then discard the contents in your backyard and use the compost to fertilize your garden.



For more information visit: [www.virginia.edu/sustainability](http://www.virginia.edu/sustainability)



START YOUR WEEK WITH A SUSTAINABLE STEP

# SUSTAINA MONDAYS

FROM THE GROUNDS UP

★ This Week: ★

Meat Free Mondays

[www.virginia.edu/sustainability](http://www.virginia.edu/sustainability)

# UVA SUSTAINABILITY DAYS

THURSDAY 13<sup>TH</sup>

NITROGEN FOOTPRINT TOOL WORKSHOP  
9:30AM  
ODUM ROOM

GLOBAL SUSTAINABILITY POSTER COMPETITION  
1:30-3:30PM  
ERN COMMONS

CLIMATE FILM SCREENING & DISCUSSION  
6:30-7:30PM  
RUFFNER

FRIDAY 14<sup>TH</sup>

ZERO WASTE INNOVATION WORKSHOP  
9:00-11:00AM  
WILSON

AMERICA RECYCLES DAY  
11:00-2:00PM  
SOUTH END OF THE LAWN

HOODS TALKING GREEN  
12:00-2:00PM  
NEWCOMB

FREE FOOD

NOVEMBER 13 - 14

FROM THE GROUNDS UP

2014

FOR SCHEDULE OF EVENTS VISIT: [WWW.VIRGINIA.EDU/SUSTAINABILITY](http://www.virginia.edu/sustainability)

BROUGHT TO YOU BY THE COMMITTEE ON SUSTAINABILITY

## TAKE CHARGE & UNPLUG YOUR ELECTRONICS!

### ENERGIZE UVA

The average residential home in the U.S. consumes 10,837 kW annually. That is almost double the global average.

**WAYS TO SAVE!**

- Don't forget to flip the switch when you leave a room. A typical commercial building uses more energy for lighting than anything else.
- Enable the "sleep mode" feature on your computer, allowing it to use less power during periods of inactivity. In Windows, the power management settings are found on your control panel.
- Unplug chargers when not in use. Anything connected to a typical power outlet will draw electricity and will increase electricity bills.

**RESOURCES**

- EPA Energy Efficiency Guides
- City of Charlottesville: Guide to Energy Savings
- UVA Green Workplace Program

[www.virginia.edu/sustainability](http://www.virginia.edu/sustainability)

## FIND YOUR POWER CAREER IN SUSTAINABILITY!

# POWER CAREERS

- PLANNING & GOVERNANCE
- OPERATIONS
- WELLNESS & JUSTICE
- ENVIRONMENT & ENERGY
- RESEARCH & EDUCATION

## WORLD WATER DAY

MARCH 22

A day for water and water for SUSTAINABLE DEVELOPMENT

**World Water Day Expo**  
March 20, 12:00pm Clark Hall

**Rivanna River Cleanup**  
March 21, 10:00am MeadowCreek, Rivanna Reservoir, Rivanna River at Freebridge

**Agricultural Decision Making and Adaptation to Precipitation Trends in Sri Lanka**  
March 19, 3:30pm Clark Hall Rm 108

**Managing National Flood Risk in the Face of climate Change and Population Growth: How Wet Are You Willing to Get?**  
March 20, 2:15pm Thornton Hall, D-wing Rm 221

one for uva planet

APR. 19

# EARTH WEEK 2015

APR. 24

## EARTH WEEK EXPO

April 22  
Newcomb Hall Ballroom  
11:00am - 2:00pm

FOR SCHEDULE OF EVENTS VISIT: [www.virginia.edu/sustainability](http://www.virginia.edu/sustainability)

BROUGHT TO YOU BY UVA SUSTAINABILITY

## Bin it TO WIN IT!

Bin your bottle in the bag with your name and computing ID and enter to win!

**STEP 1:** Use the sharpie to write your name and computing ID on your recyclable bottle or can.

**STEP 2:** Place the bottle or can in the recycling bin located next to this sign. It has a blue top.

**STEP 3:** Keep recycling! Winners will be contacted in a few weeks. Follow us on twitter to get the latest updates: @sustainableuva

[www.virginia.edu/sustainability](http://www.virginia.edu/sustainability)

#RM2015  
#UVA  
@recyclemania

## UVA Saves Hour

Thursday, June 25th 2-3pm

The goal: Reduce 12 megawatts for one hour!

**TURN OFF LIGHTS**

- Turn off your office, hallway and conference room lights.
- If your office has windows, open the blinds to allow natural light to penetrate the room.

**UNPLUG KITCHEN APPLIANCES**

- Unplug kitchen appliances such as toasters, microwaves, coffee makers, and anything else that is not being used.

**UNPLUG DEVICES**

- Consider unplugging devices such as printers, fax machines, chargers, phones, and fans. Anything plugged into the wall continues to consume power, even while off.

**TURN OFF COMPUTER**

- Shut down your computer and monitor if possible, or if working from a laptop, work off of battery power.

**TAKE A FIT BREAK**

- Reinvigorate your body with a short exercise break.
- Work with your supervisor to accommodate departmental needs. A 15 minute walk will boost your mood and burn 100 calories!

**TAKE A WALK**

- Relax with a short walk and get one step closer to completing your 10,000 steps for the day.

**USE SMARTPHONE**

- Conduct work related tasks such as checking email and making calls using your smartphone.

**OUTDOOR MEETING**

- Schedule an outdoor meeting to get a change of scenery. Walking meetings are a fun and healthy way to accomplish tasks.

**WAYS TO SAVE**





# SUSTAINABILITY ADVOCATES JOIN NOW



[www.virginia.edu/sustainability](http://www.virginia.edu/sustainability)

## Are You a Leader?



### Promote

Report announcements and information from U.Va. Sustainability at weekly House or Areas Council meetings. Promote sustainability events, and increase awareness of sustainability on grounds.



### Engage

Engage peers in creating a sustainable community and staff sustainable events on Grounds and Residence Areas. Host dorm specific events, such as the Dorm Energy Race, by encouraging participation of residents.



### Educate

Educate peers on conservation practices with your increased knowledge of recycling, energy, and water. Develop leadership skills, while having a positive impact on your community.



### Participate

Participate in bi-weekly meetings to discuss events, raise questions and gather information related to sustainability at U.Va. Volunteer for Grounds-wide events such as Earth Week, World Water Day and America Recycles.

**Deadline is Sept 18th, 12 AM To apply: [click here.](#)**





# DISCOVER

TEACHING, RESEARCH, AND CURRICULUM

U.Va. currently offers over **160 undergraduate** and over **150 graduate** sustainability focused or sustainability related courses.

**Global Studies – Environments + Sustainability Major:** The inaugural class of the Global Studies Major was selected in the 2013-2014 academic year. The interdisciplinary major is housed within the College of Arts and Sciences and features four tracks: Development Studies, Public Health, Security & Justice, and Environments + Sustainability. Students majoring in Global Studies – Environments + Sustainability, which is directed by Phoebe Crisman, address problems associated with human transformations of the earth through the triple lens of environment, equity and economy. Students undertake four required courses in global history, diagnostics, humanities, and cultures, and can choose from over 100 electives.

**Global Sustainability Minor:** To date, 141 students have graduated with this minor and there are currently 114 students enrolled across six schools. The Minor requires five courses, including the foundation course: Global Sustainability, and one course each from the categories of equity, environment, and economy, and a final capstone course. In Spring 2015, Global Sustainability students participated in a Think Global/Act Local poster competition.



# RESEARCH

## INNOVATING FOR THE FUTURE

Over **24 departments** currently engage in sustainability-related research. Interdisciplinary research is currently undertaken in the following areas:

- Climate Change
- Sea Level Rise
- Rapid Urbanization
- Life Cycle Analysis
- Ecosystem Services Valuation
- Renewable Energy
- Sustainable Development
- Zero Carbon Architecture
- Environmental Ethics
- Food Security



**Resilience Forum:** Associate Vice President for Research, Sustainability and the Environment, Karen McGlathery, continues to advance pan-university sustainability research at U.Va. In May, Professor McGlathery organized a Resilience Forum to explore and solicit feedback on the possibilities for interdisciplinary research. President Sullivan provided opening remarks and sessions were moderated by Deans Baucom, Benson, and Meyer. Faculty members delivered five minute lightning talks in the topic areas of Water/Food/Energy Security, Resilient Communities, Stewardship and Governance.

**Jefferson Trust Resilience Fellows:** Ten graduate and six undergraduate students across 15 departments and six schools were selected as inaugural Jefferson Trust 2015 Resilience Fellows. Research projects include Waterless Fuel Fracturing, Systems Thinking Approach to Local Food Systems, Renewable Energy Technology, Economic Valuation of Coastal Ecosystem Services, and Visual/Sound Composition of the California Water Crisis.

**International Sustainability Unit's meeting on Forests, Climate Change and Development:** U.Va. Environmental Sciences Professor Deborah Lawrence was invited to speak at The Prince of Wales' International Sustainability Unit's meeting on Forests, Climate Change and Development. The meeting was attended by foreign diplomats and policy makers from Norway, Germany, Indonesia, and a cohort of United Nations delegates. Dr. Lawrence was invited to share her research on deforestation in tropical forests and its impact on the environment.

**World Water Day:** Throughout the last week in March, speakers from across the country spoke on the importance of water. Lecture topics included "Water Crisis in California: Opportunities for Innovation", "Our Global Water Future: New Solutions for a Thirsty World," and "Managing National Flood Risk in the Face of Climate Change and Population Growth."

**Earth Week:** Mary Nichols, Chair of the California Air Resources Board and leader of California's landmark cap-and-trade program, presented the Moore Lecture in Environmental Sciences, "Tackling Climate Change the California Way: Building the Low Carbon Economy of the Future."

# GROUNDS AS A LIVING LAB

## LEARNING IN ACTION



**GIFT GRANT PROJECT**

**GIFT Grant:** The Green Initiatives Funding Tomorrow (GIFT) Grant is an innovative and exciting program that provides grant funds for student-led and student-involved sustainability projects on Grounds. The fourth round of GIFT projects were funded in spring 2015, including: composting bins in the School of Architecture, a hoop house at the Morven Kitchen Garden, a bike education workshop, composting bins at the dumpling truck, support for the Greens to Grounds initiative, composting at International Residential college, a pedal-powered smoothie station, a water bottle refill station at Mem Gym, and a research project to test a polyethylene biogas digester.

**IDEA Student District Energy Video Competition:** To learn and share knowledge about district energy on Grounds, students created a district energy video, which won **1st place in the International District Energy Association Student Video Competition.**



# TEACHING AND RESEARCH SUBCOMMITTEE

## INTERDISCIPLINARY LEARNING



**The Teaching and Research Subcommittee**, under the University Committee on Sustainability, is co-chaired by Phoebe Crisman and Deborah Lawrence. The Teaching and Research Subcommittee focuses on the Committee on Sustainability’s work in the following area: “Fostering the development and dissemination of sustainability knowledge through research and teaching.” The subcommittee is currently working to inventory and document faculty members engaged in sustainability-focused or sustainability-related teaching or research. This information was used to support U.Va.’s AASHE STARS submission, but the ultimate goal of this inventory is to continue to expand interdisciplinary and collaborative sustainability research and teaching.



# COMMITTEE ON SUSTAINABILITY

BRENT BERINGER

*Director of Dining Services*

REBA CAMP

*Administrator, Medical Center*

LIA CATTANEO

*Undergraduate Student*

PHOEBE CRISMAN

*Associate Professor of Architecture*

ANTHONY DE BRUYN

*University Spokesperson*

KEVIN FOX

*Administrator, Medical Center FP&C*

JAMES GALLOWAY

*Professor of Environmental Sciences*

DAVID GERMANO

*Professor of Religious Studies*

CHERYL GOMEZ

*Director of Operations, Co-Chair of Committee*

CARLA JONES

*Lecturer and Program Director*

WILLIAM KEENE JR

*Research Professor*

DEBORAH LAWRENCE

*Professor of Environmental Sciences*

MICHAEL J. LENOX

*Professor of Environmental Sciences*

KAREN J. MCGLATHERY

*Assoc. VP for Research, Sustainability & the Environment*

FRED MISSEL

*Director of Design & Development*

*U.Va. Foundation*

JULIA MONTEITH

*Senior Land Use Planner*

KRISTIN MORGAN

*Program Director, Diversity & Equity*

NINA MORRIS

*Sustainability Outreach & Engagement Manager*

AMY MULDOON

*Weldon Cooper Center for Public Service*

SCOTT NORRIS

*Director of Business Services*

MATTHEW ORESKA

*Graduate Student*

ALEXANDER M. RUSSELL

*Undergraduate Student*

WYNNE STUART

*Associate Provost for Academic Support*

DONALD SUNDGREN

*Associate Vice President and Chief Facilities Officer*

ANDREA TRIMBLE

*Director, Office for Sustainability*

JESSICA WENGER

*Environmental Projects Manager*

REBECCA WHITE

*Director, Parking & Transportation*

MARK WHITE

*Associate Professor of Commerce, Co-Chair of Committee*

TIMOTHY WHITE

*Senior Immigration Consultant*

HELEN WILSON

*Assistant University Landscape Architect*

[WWW.VIRGINIA.EDU/SUSTAINABILITY](http://WWW.VIRGINIA.EDU/SUSTAINABILITY)

